



The Resonator

Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club

Volume 5, Number 12

www.FairLawnARC.org

December 2020

From The President

Dear FLARC Family,

We are about to end 2020 and what a year it has been. I am sure none of us expected to live this experience. We have all been touched one way or another by the effects of this pandemic.

Our thoughts and prayers go to all who have been sick or have left us because of COVID. Now with the arrival of a vaccine quickly approaching, I sincerely hope our lives once again start to get close to normal.

We had a wonderful annual meeting and I congratulate the new 2021 board of directors for FLARC. I thank you all for your confidence in allowing me to serve you for another year. Also our welcome and thanks to the new members of the board, our Treasurer Bruce NJ2BK, our

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New Member Profile

NAME: Bill Kelly

CALL: NB1ILL

What do you do/what did you do for a living?

I am retired from the NYC Transit Authority after 34 years. My last ten years, I was the Safety Officer for the Facility Division of the Dept. of Buses. It was there I found how much I liked teaching.

How did you get interested in ham radio?

Before I retired, I joined the Red Cross to teach people how to be ready in a disaster. I then got interested in sheltering and became a Shelter Manager. I heard about a Red Cross radio group that could help if normal communications failed. I joined the American Red Cross Amateur Radio Club (ARC2) and got my Tech license in 2009. My call was KC2VYE.

What parts of the hobby most interest you?

Teaching and testing. ARC2 ran classes for new HAMs and for upgrades. I got involved first by helping out (setting up and making coffee) then I helped co-teach a General class that I was also a student in and got my General license in 2012. I then teamed up with our lead instructor, Dave Everson, KC2RIG SK, until he passed in 2019. I have been creating the Tech and General training presentations since 2012 and now create classes for all three levels. I became an Extra in 2017. I am very proud that ARC2 has taught 404 Techs, 102 Generals and 14 Extras since 2012.

When I became a General, I also became a VE and I am now the VE Liaison for ARC2. Since 2013 we have held monthly VE sessions and look forward to getting back to it.

Since COVID has shut everything down, I have started giving virtual classes for Tech and General and have helped at drive-in VE sessions given by the Electronic

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SAVE THE DATE!!

Friday, December 18, 2020

7:30 PM EST/Via Zoom

"An Update on ARRL Activities

And 2021 Plans"



**David Minster
NA2AA
ARRL CEO**



**Ria Jairam
N2RJ
ARRL Hudson Division Director**



Stay tuned for more details and the link to the presentation and discussion.

FLARC to revert to Outdoor VE Testing on December 12th

On December 12, 2020, Fair Lawn Amateur Radio Club will continue amateur radio test sessions on a trial basis. These sessions will be held in the commuter parking lot of the **Fair Lawn Recycling Center**. The location is at 19-25 Saddle River Road, Fair Lawn, NJ 07410. Inclement weather will cancel testing. **Covid-19 related incidents** will cancel testing.

For full details, please see page 9 of this Resonator.

Prior to Testing:

Send an email to wo2w@arrl.net requesting to book your spot.

Please Bring With You:

- You **MUST** bring and **WEAR** personal PPE items including a face mask.
- 2 pens and 2 pencils. None will be provided to you due to possible virus transmission.
- Your FRN number, and (if licensed) a copy of your ham license or a valid CSCE (Certificate of Successful Completion Exam).
- A completed form 605 (which will be sent to you ahead of your test session)
- Additionally, the **\$15.00 exam fee**. This is payable in cash (exact amount is a must).
- A completed form 605 and 3 copies of the CSCE form which will be sent to you ahead of your test session along with your assigned test time.

Additional scheduled testing dates will be:
January 16, 2021, February 13, 2021, March 13, 2021, and April 10, 2021.

FLARC is following government Covid-19 guidance closely and all events will adhere accordingly to the latest advice.



FLARC Announces Outdoor Hamfest For Saturday - April 24, 2021

The club has announced the creation of its first hamfest to be held at the Fair Lawn Recycling Center on Saddle River Road on Saturday, April 24, 2021 with a rain date to be determined.

This replaces our 2020 annual Thanksgiving Friday auction, which was cancelled by the Covid-19 virus.

Details will follow but **please save the date** and **please volunteer** to make this a successful club event.

For questions please contact Gene WO2W at
wo2w@arrl.net
or visit our website at
www.FairLawnARC.org.

FLARC is following government Covid-19 guidance closely and all events will adhere accordingly to the latest advice.

An advertisement for ARRL membership. It features a large blue globe graphic with the text "Join... or Renew!" overlaid. To the right is a vertical list of ARRL's pillars: Public Service, Advocacy, Education, Technology, and Membership. At the bottom is the website address "www.arrl.org/join".

Public Service
Advocacy
Education
Technology
Membership

www.arrl.org/join

Testing also available at Bergen New Bridge Medical Center. Register at newbridgehealth.org.

The County of Bergen in Partnership
with Bergen New Bridge Medical Center announce

Regional Community Drive-Thru COVID-19 Testing

Hosted by

Bergen Community College- Lot A
400 Paramus Road, Paramus, NJ

Starts December 1st!

**12/1, 12/3,*12/5, 12/7, 12/9, 12/10,12/14, 12/16, 12/17,
*12/19, 12/21, 12/22, 12/23, 12/28, 12/29 & 12/30**

Saturday sites operate from 9AM-2PM

Check-in begins at 8AM

Testing begins promptly from 9AM - 2:30PM

Nasal Swab Antigen Test

COVID-19 nasal swab antigen test which allows for rapid results in just 24 hours.

YOU MUST PRE-REGISTER!

NO WALK-UPS AVAILABLE

Please note, you must bring your mobile device for check-in

<https://www.research.net/r/AntigenBCCC>



ALL MOBILE TESTING SITES ARE WEATHER PERMITTING

In case of inclement weather, please visit www.co.bergen.nj.us for updates.



Thanks to Jim Joyce K2ZO for sharing this graphic.

Fellow FLARC Members,

As we all know, the coronavirus continues to be top of the news and that the club is closed until further notice. Out of an overabundance of caution and our care for your safety, all FLARC events are postponed until further notice due to COVID-19.

Check in on our nightly health and welfare net on the W2NPT repeater at 7:00 PM and let us know how you're doing. You may be isolated at this time but you are not alone. Stay safe!

Important notice for preventing COVID-19 outbreaks.

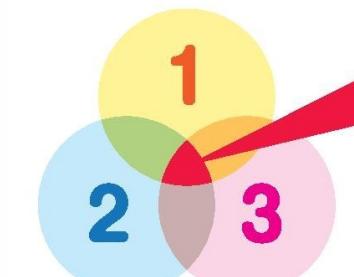
Avoid the “Three Cs”!

- 1. Closed spaces** with poor ventilation.
- 2. Crowded places** with many people nearby.
- 3. Close-contact settings** such as close-range conversations.



One of the key measures against COVID-19 is to prevent occurrence of clusters.

Keep these “Three Cs” from overlapping in daily life.



The risk of occurrence of clusters is particularly high when the “Three Cs” overlap!

In addition to the “Three Cs,” **items used by multiple people** should be cleaned with disinfectant.
Source: www.mhlw.go.jp

Nomar NP4H -- October 2020

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM, and "for the duration" they are held using Zoom.

2021 Officers, Committees and Assignments

President	Nomar Vizcarrando	NP4H
Vice President	John L. Howard	W2JLH
Treasurer	Bruce Kalogera	NJ2BK
Secretary	Tom McCabe	N2AXX
Trustee	Ed Efchak	WX2R
Trustee	Don Cassarini	K2PD
Trustee	Fred Wawra	W2ABE
<i>Field Day</i>	Steve Wraga	WA2BYX
<i>Member Services</i>	Judith Shaw	KC2LTM
<i>Publicity</i>	Ed Efchak	WX2R
<i>Publicity</i>	Gene Ottenheimer	WO2W
<i>Publicity</i>	Judith Shaw	KC2LTM
<i>Publicity</i>	Susan Frank	W6SKT
<i>Program</i>	Lowell Vant Slot	W2DLT
<i>Publicity</i>	Karl Frank	W2KBF
<i>Publicity</i>	Nomar Vizcarrando <i>(ex officio)</i>	NP4H
<i>Social Media</i>	Dave Marotti	NK2Q
<i>Video/YouTube</i>	Thom Guida	W2NZ
<i>VE Liaison</i>	Gene Ottenheimer	WO2W
<i>VE Liaison</i>	Pete Senesi	KD2BMX
<i>Contests</i>	Lowell Vant Slot	W2DLT
<i>Education</i>	Gordon Beattie	W2TTT
<i>Education</i>	Randy Smith	WU2S
<i>Education</i>	John L. Howard	W2JLH
<i>Education</i>	Fred Wawra	W2ABE
<i>History</i>	Fred Belghaus	W2AAB
<i>Health and Welfare</i>	Judith Shaw	KC2LTM
<i>Photographer</i>	Don Cassarini	K2PD
<i>W2NPT Trustee</i>	Paul Cornett	W2IP
<i>Technical</i>	Paul Cornett	W2IP
<i>Technical</i>	Randy Smith	WU2S
<i>Technical</i>	Fred Wawra	W2ABE
RACES/ARES Director	Dave Gotlib	KD2MOB
RACES/ARES Liaison	Steve Wraga	WA2BYX
<i>Newsletter Editor</i>	Ed Efchak	WX2R
<i>FL Town Liaison</i>	Gene Ottenheimer	WO2W
<i>Net Scheduler</i>	Brian Cirulnick	KD2KLN
<i>Quartermaster</i>	Brian Cirulnick	KD2KLN

Fair Lawn RACES/ARES Corner



Hello fellow ARES members and friends. The Fair Lawn Amateur Radio Emergency Service (FL-ARES) group had a very busy and productive month in November. In my opinion, all ARES groups were busy during the past month preparing for and executing an ARES drill with the American Red Cross on November 14th. Unlike most prior drills, this one was performed on an individual basis.

During the ARES / American Red Cross (ARC) drill we were required to use Winlink to send ARC Forms to the Northeast sector of the ARC. Winlink is a messaging program which encompasses various messaging applications such as Telnet, Packet, VARA HF and VARA FM. The idea behind the drill is to communicate with an ARC Form 213 form using a laptop connected to a radio using a SignalLink device. Think of Winlink being capable of sending email type messages with attachments, while not having internet or wifi access!! It can be executed locally using VARA HF or VARA FM. In my case, I connected to the local Winlink *Radio Message Server* (RMS) ALØY-3 via the NJ2PC Repeater on a frequency of 146.610 MHz using Winlink, VARA FM.

When the completed ARC Form 213 was ready to be sent, I placed it in the outbox and clicked on the send button – which then used SignalLink to press the PTT, contacting the RMS via the Repeater. Just like that, the ARC Form 213 was sent, followed later by an acknowledgement back to me. Over 1,000 Winlink messages were received by the ARC during the drill which lasted from 9:00 AM through 6:00 PM EST on November 14th. Photos are shown below.

I would like to thank Jim N2JLF, Karl W2KBF, Ed KD2TVZ, Gordon W2TTT and Aly ALØY among others for participating in this drill. A special thank you

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Fair Lawn RACES/ARES Corner, cont.

goes to Aly ALØY for installing an RMS using VARA FM that can be reached using the NJ2PC Repeater. ALØY-3 is the only RMS within 100 miles which has the capability of using VARA FM!!

I would also like to thank Jim N2JLF, Karl W2KBF and Aly ALØY for providing Winlink presentations and discussions on the FL ARES Net over the last couple weeks. Winlink opens up the world to emergency communications. There are many hams which aren't very familiar with Winlink; however with practice, discussions and watching videos, learning comes a long way.

Please note the time of the FL-ARES KB2FLA Nets. They are taking place on Wednesdays at 2000 hours on the FLARC and NJ2BS Repeaters. Please join us every Wednesday for any updates, messages or activities which may take place. We are practicing the operation of Winlink and preparing traffic and messaging for our membership.

We are on the following Repeaters and Echolink:

The Fair Lawn ARC Repeater info is: RX 145.47 MHz / TX 144.87, PL Tone 167.9 Hz. Echolink W2NPT-R.

The NJ2BS Repeater info is: RX 146.835 MHz / TX 146.235, PL Tone 151.4 Hz. Echolink KD2BKD-L.

FL-ARES would like to thank the FLARC for the use of its repeater as well as the Venture Crew 73 73 Club for the use of their repeater.

Fair Lawn RACES/ARES Corner, cont.

We are fortunate to make Fair Lawn and the surrounding communities our home. With our leadership and support from the FLARC we can grow and be of assistance in many community events. We are always seeking new members to join FL-ARES.

Please sign up for various nets and activities taking place at the following email address:

<https://arrl.volunteerhub.com/lp/nnj>

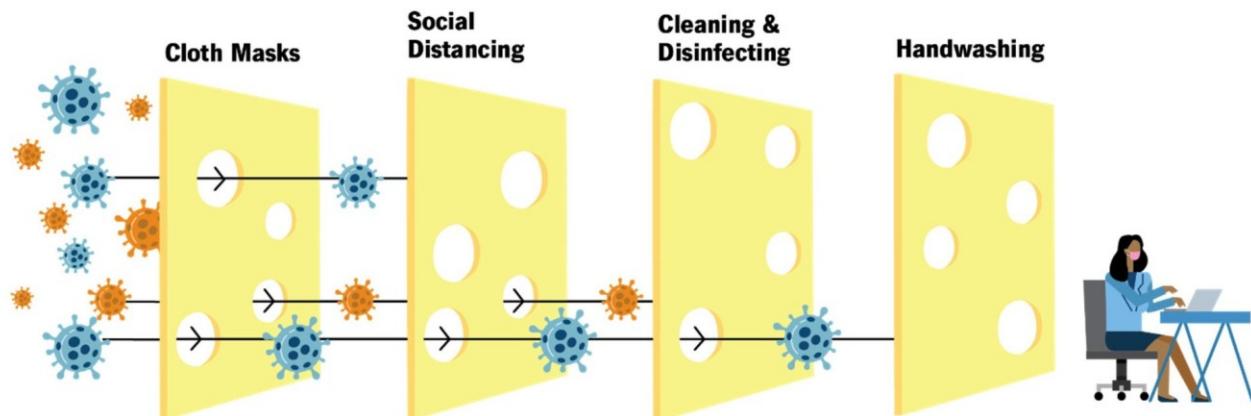
Info on FL-RACES is as follows:

Our next FL-RACES KB2FLR net will take place on Wednesday, December 9th at 2015 hours on the Fair Lawn ARC Repeater as well as the NJ2BS Repeater (frequencies noted above). Thank you to the Fair Lawn Amateur Radio Club for permitting FL-RACES for using the repeater.

FL-RACES is part of several RACES groups which operate within Bergen County and from time to time has training opportunities with Bergen County RACES. We were the Net Control Operating Station for the BC-RACES Net on November 11th at 7:45 PM. David KD2MOB was the Net Control Operator and scribe during the BC-RACES Net. Thank you to those who have taken part as the Net Control Station in the past.

During the COVID-19 pandemic, our monthly briefings take place during the FLARC business meeting. Please join us for the next FL-RACES briefing. The volunteer efforts of our members are very much appreciated.

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MASTER EVENT CALENDAR

Out of an overabundance of caution and our care for your safety, (not to mention state law) all FLARC events are postponed or rescheduled until further notice due to COVID-19.

December 18, 2020 FLARC Speaker Series: David Minster NA2AA and Ria Jairam N2RJ
"The State Of The ARRL At Year End" (Via Zoom Room)

January 1, 2021 Happy New Year!

January 15, 2021 FLARC Speaker Series: Lauren Libby WØLD
"Behind the Scenes at Trans World Radio (Zoom Room)"

April 21, 2021 The FLARC Hamfest

TBD Return Visit To iHeartRadio/WSUS transmitter

TBD Field Trip to Sarnoff Center, Princeton



**More Than A Club...
A Community Of Friends!**



Hidetsugu Yagi's 130th Birthday Google Doodle

SIG Group Participation as of December 4, 2020

Here is an update on the roster of Special Interest Groups:

Follow FLARC ON THE WEB

Facebook: <http://facebook.FairLawnARC.org>

Twitter: @FairLawnARC

Blog: <http://blog.FairLawnARC.org>

Youtube: <http://youtube.FairLawnARC.org>

Website: <http://FairLawnARC.org>

DMR	28
Monitoring	23
DX	11
FT8	15
FLARC General	132

Sign up for a group... or ...
why not start one?

Contact webmaster@FairLawnARC.org if you would like to start a new Special Interest Group.



**SPECIAL RELEASE:
AMATEUR RADIO TESTING AT THE FAIR LAWN AMATEUR RADIO CLUB**

On December 12, 2020, Fair Lawn Amateur Radio Club will continue amateur radio test sessions on a trial basis. These sessions will be held in the commuter parking lot of the **Fair Lawn Recycling Center.** The location is at **19-25 Saddle River Road, Fair Lawn, NJ 07410.** Inclement weather will cancel testing.

Session is at 09:00 AM. **A document will be provided to you prior to the date to indicate the session assigned to you.** You must have it with you to take the test. When you arrive, please tune your FM radio to 87.9 so you can listen to instructions.

Prior to Testing:

Send an email to wo2w@arrl.net requesting to book your spot.

Upon Arrival:

Stay in your vehicle as you will be directed to an assigned parking space. **Expect to remain in your vehicle for the duration. (Note NO BATHROOMS ARE AVAILABLE).** You must have a government issued ID such as a valid driver's license or passport, and **3 completed copies of the FCC CSCE (Certificate of Successful Completion Exam) form.**

Please Bring With You:

- You **MUST** bring and **WEAR** personal PPE items including a face mask, and gloves.
- 2 pens and 2 pencils, None will be provided to you due to possible virus transmission.
- A clipboard or a hard surface to write on and be visible to the volunteer examiners.
- **Your FRN number, and (if licensed) a copy of your ham license or a valid CSCE.**
- **A completed form 605 (which will be sent to you ahead of your test session)**
- Additionally, the **\$15.00 exam fee.** This is payable in cash (exact amount is a must).

The Testing Procedure:

- Testing will be performed in your personal vehicle. **You must remain in your vehicle for the duration of the event.**
- Only the candidate testing may remain in the vehicle--**do not bring any passengers/supporters with you.**
- Please clear front area of vehicle of all paperwork, computers, cell phones, etc. anything which could be used to hold answers to test questions. **Turn off cell phones and place in glove box or out of reach.**
- **Windows must be rolled down** an inch or two so proctors can hear inside the vehicle.
- A masked/gloved Volunteer Examiner will be handing out and picking up tests from each vehicle. **The Volunteer examiner must be able to see you during the whole test.** If at any time you feel unsafe, please feel free to abort the test, return the test materials and safely leave the testing area.
- Let's protect each other....and good luck!
- For information and scheduling, please contact:
- Gene/WO2W
- WO2W@arrl.net
- Visit our website at www.FairLawnARC.org

Interested in Chasing DX?

A casual group of FLARCers including Van W2DLT, John KD2NRS, Brad KM2C, Karl W2KBF, Nomar NP4H, Steve WI2W, Jim W2JC, Larry WA2ALY and Fred W2AAB have formed an email group to keep each other in touch in (real) time of when the rare or interesting ones show up to chase.

Interested? See or contact Van W2DLT.

THE GREAT FLARC HAMFEST Save The Date! April 24, 2021



FLARC Celebrates 500 YouTube Subscribers!

Thom W2NZ noted that our YouTube site now has 500 subscribers – quite a feat for our little club. A big thanks to Thom and all his hard work!



Thom W2NZ

Please Note: Operating at W2NPT

Starting in January 2019 club trustees have sign-in sheets for all operating positions. There is a clipboard at Operating Position #1, #2 (digital) and #4 with a form on which to sign up for half-hour time slots. No longer first come-first served, in fairness to all who want to use our club equipment and the new antennas. Hopefully some day we will again be able to use our operation positions!

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

<http://apparel.FairLawnARC.org>
<http://auction.FairLawnARC.org>
<http://blog.FairLawnARC.org>
<http://calendar.FairLawnARC.org>
<http://events.FairLawnARC.org>
<http://exams.FairLawnARC.org>
<http://facebook.FairLawnARC.org>
<http://news.FairLawnARC.org>
<http://swap.FairLawnARC.org>
<http://tech.FairLawnARC.org>
<http://youtube.FairLawnARC.org>

NEW !

<https://groups.io/g/FairLawnARC>



November 2020 Blog Traffic

With coronavirus dominating the news, both visitors and page views to the blog were down again this month. We've also done more email and groups.io to members.

	November 2020	November 2019
Views	406	971
Visitors	266	493
Posts	3	5

There is new content nearly every day so it's really worth the look at both FairLawnARC.org and the blog.

<http://blog.FairLawnARC.org>

December 2020

Near and Far Net Controls

Here is the roster for net controls for the upcoming month as reported by Brian KD2KLN:

Date	Net Control
December 7	KD2KLN
December 14	KD2MOB
December 21	(anyone care to have a go?)
December 28	N2AAM

The *Near and Far Net* had Patrick JS6UGC in Okinawa check in this month... our most distant yet.

But we need more volunteers to be net controls -- if everyone takes their turn it's less burden on the others. And it's easy.

Volunteer --- don't wait to be asked
(unless you really want to be flattered).

Ham Radio Is Contagious And It Won't Make You Sick!!

Oh Yes! It's Time For The 2021 FLARC Member Survey

The 2021 FLARC member survey will arrive in your email box on Saturday December 5th.

This year the questionnaire is shorter than prior years (thank you!) but no less important as it reflects a lot of the changes brought about by Covid-19.

We'll present the results at the February *Kawfee Tawk*.



Club Apparel — Get Them While They're RED!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.
Go to www.hamthreads.com
or visit <http://apparel.FairLawnARC.org>

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color.

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



Even Santa Wears Red—Use Your Imagination!

2020 FLARC Nets On The W2NPT Repeater:

Near and Far Net Mondays at 8PM

Health and Welfare Net Wednesdays at 7PM

W2NPT and NJ2BS Repeaters

Congratulations To Our 2021 Officers!!

President:	NP4H Nomar Vizcarrando
Vice President:	W2JLF John Howard
Secretary:	N2AXX Tom McCabe
Treasurer:	NJ2BK Bruce Kalogera
Trustee:	K2PD Don Cassarini
Trustee:	WX2R Ed Efchak
Trustee:	W2ABE Fred Wawra

Remember: Ham Radio Is A Contact Sport!

BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such a gift is worthy.

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL 167.9) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has over one hundred fifty paid members. Dues are currently \$25 per year/\$20 for new members.

For more information, please see our website, at
<http://membership.FairLawnARC.org>

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A New Net Is Born!

The Health and Welfare Umbrella Net
Wednesdays
7PM Local
W2NPT and NJ2BS Repeaters
Open To All

Special Note:

As non-profit, the IRS now requires that we disclose annually the use of paid lobbyists to our members and indicate approximately what percentage of their dues goes toward that. 0% of your 2021 dues payment will be used by the club to directly pay a lobbyist firm to lobby on behalf of all our members regarding pending legislation that impacts our hobby.



**FAIR LAWN'S
COMMUNICATIONS CENTER!
With New Antennas On The Roof!**



2020 Near and Far Net Check-In's

Now in its third year, the FLARC *Near and Far* net is chugging along each week. Here is list of our check-ins beginning on New Year's Night in no particular order. Mondays at 8PM on the repeater.

Call	Name
N2AAM	Dave
WO2W	Gene
W2DLT	Van
KD2MOB	Dave
W2JC	Jim
WI2W	Steve
N2SU	Bob
N2OEL	Noel
WX2R	Ed
W2AAB	Fred
KD2KLN	Brian
W2MSA	Noel
W2KBF	Karl
AC2ZU	Charlie
W3EH	George
KC2TBD	Ron
TG9AOR	Joe
N2OEL	Noel
N2JLF	Jim
W2TAB	Tom
KC2TBD	Ron
KA2YRA	Steve
WA2BYX	Steve
KD2BKD	Bob
KC2K	Stan
KA2YRA	Steve
WA2CCN	Hank
W2TTT	Gordon
NJ8Y	Ahmed
NJ2BK	Bruce
W2CQX	Dan
W2KNG	Jim
WK2T	Lee
W2NZ	Thom
K2PD	Don
KD2JIP	Dave
K2ZVL	Van
KC2ASA	Peter
W2AAB	Fred
KD2LRX	Jason
K3DQP	Walt
KD2TVZ	Ed

2019-20 Member Profiles

The year is now complete and here is a list of the 2019 monthly profiles. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

Month	Name	Call Sign
January 2019	Dave	KD2JIP
February	Jim	K2ZO
March	Zach	KC2RSS
April	Bob	N2SU
May	Stan	KC2K
June	Steve	WA2BYX
July	Roger	K2RRB
August	Judith	KC2LTM
September	Chris	W2TU
October	Bob	N2SU
November	Bob	WA2ISE
December	Carol	KD2NMV
January 2020	Gordon	W2TTT
February	Chris	KD2JQZ
March	Glenn	KD2MDR
April	Steve	K2SAB
May	Ahmed	NJ8Y
June	Charlie	AC2ZU
July	Jim	N2JLF
August	Walt	K3DQB
September	Gregg	N2ECH
October	Jim	W2KNG
November	Dave	KD2SGM
December	Bill	NB1LL

2021 Dues Are Due

Dues for 2021 will be accepted by the club starting on December 4th with the 2020 Annual Meeting. There are no changes to dues (\$25) for the upcoming year. Cutoff date is March 31, 2021.

Please makes checks payable to "Fair Lawn Amateur Radio Club" and send them to:

**Bruce Kalogera NJ2BK
163 Meadow Lane
Secaucus, NJ 07094**

Mail sent to the clubhouse will be delayed due to Covid. See website for other membership options.

Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

Month	Name	Call Sign
January 2016	Pete	KB2BMX
February	Marco	KC2ZMA
March	Ron	KC2TBD
April	Kai	K2TRW
May	Larry	WA2ALY
June	Dave	N8MAR
July	Steve	WI2W
August	Thom	W2NZ
September	Brian	KD2KLN
October	Brad	KM2C
November	Al	WA2OWL
December	George	W3EH
January 2017	Fred	W2ABE
February	Dave	KD2MOB
March	Randy	WU2S
April	Lee	KD2DRS
May	Gene	WO2W
June	Carol	KD2NMV
July	Kevin	KC2KCC
August	Robert	KD2NOG
September	Robert	KD2BKD
October	John	KD2NRS
November	Fred	W2AAB
December	Margaret	W2GB
January 2018	Brian	KD2OAZ
February	Bennett	KO2OK
March	Van	W2DLT
April	Aly	ALØY
May	Bruce	NJ2BK
June	Dave	N2AAM
July	Karl and Susan	W2KBF and W2SKT
August	Steve	KA2YRA
September	Paul	K2PJC
October	Skip	KD2BRV
November	Jim	W2JC
December	Tom	N2AAX

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office. Thanks Randy!!!

Blood Donors Needed In This Time Of Emergency

The Red Cross and related organizations are in great need for blood donations since most corporate blood drives have been cancelled.

Communitybloodservices.com has a network of offices open during the week and would really welcome folks making appointments to donate blood.

Thanks!



**American
Red Cross**

Be "The Boss" For An Hour – Become A Net Control Operator for the W2NPT "Near And Far" Net!

What is the "Near and Far Net"?
It's a get-together on-the-air to chat about stuff!

It takes place on Monday nights at 8pm (eastern local time) on the W2NPT repeater (145.47MHz, 6kHz negative shift, pl 167.9). You do NOT need to be able to hit the repeater to participate, heck you don't even need a radio (although you will need a call-sign).

You can connect to the net via ECHOLINK (on your computer or cell-phone), and you can even run the net as a net controller via Echolink. So, do not be held-back by any preconceived notions, we welcome everyone into the net and *if* you do wish to run the net, we can provide you with everything you'll need to comfortably perform that function.

So join us on Mondays at 8pm, and if you wish to sign up for Net-Control, for *any* Monday of 2021, contact:

KD2KLN@ARRL.NET

New Member Profile, continued

Technology Society of NJ (ETSNJ), the West Essex Amateur Radio Club (WEARC) and FLARC.

What does belonging to FLARC mean to you?

How do you/can you better contribute to the club?

I started going to see guest speakers at FLARC, along with my wife Margaret, KD2MAR. It was a great way to expand our knowledge of radio. After many free sessions, we decided to join and pay dues to FLARC.

I would like to share my training presentation materials and help others who may want to teach.

What else can you tell the club about yourself and/or ham radio?

I have gone back to working as a consultant with the NYC Transit creating and proctoring hands on exams in the building trades. I also teach Red Cross disaster classes to volunteers and partners, including the Fair Lawn CERT team, and teaching Special Ed High School students how to be prepared for a disaster.

What other ham related clubs or organizations do you belong to?

I am looking forward to working more with the WEARC and have just become involved with a group that is looking to get more youth and women involved in radio and getting their Tech license.



Bill NB1ILL

FLARC November 14, 2020

VE Testing Results

With VE testing back on a trial basis, Gene WO2W reports the following results:

Name	Call	License Earned
Paul Medelios		Technician
Leslie Citiome	K9NNT	General

Five Special Interest Groups [SIGs] Already Formed: Any Others?

We may be in lockdown but there is no lack of club interest. So far, the Radio Monitoring Group has 18 members and we've started a Digital Modes (DMR) group thanks to KD2DRS and NP4H. There is also an FT8 SIG, a DX SIG and a POTA SIG (headed up by Noel W2MSA).

Other possible groups, from the member survey, include:

- *Radio Propagation*
- *Antennas and how they work*
- *Kit building*
- *Raspberry pi and Arduino and*
- *Ham radio software*

Anyone interested in leading any of these groups... ? Please contact Nomar NP4H.

**Here Comes The Sun
Hello Solar Cycle 25!**



Image from May, 1926 QST, courtesy ARRL

The Way We Were By Fred Belghaus W2AAB

Receivers I Have Known – Part 1

It may be hard to believe, but once I was five years old. I had just entered kindergarten, and was visiting family in Brooklyn. There, in my aunt's kitchen, was an old wood stove, and an older sink. My aunt spent much of her life standing over one or the other. In my aunt's kitchen, there was also a small table, and on it a small radio made by Arvin.



Arvin Model 444
Image: Preserving Arvin

It was a cheap set, first manufactured in 1946 - which made it six years old when I first saw it in 1952. It had a metal case, and when it was on, if you ran your hand over the top of the case, you'd feel a gentle "buzz," which was leakage of the line voltage when the AC plug was inserted the "wrong way" in the electrical outlet. It was an AC-DC set, with no power transformer, just a string of tube filaments that roughly equaled 110 Volts or so. Yes, line voltages were lower in those days. As a matter of fact, the filament voltages of the tubes in the Arvin 444 added up to only 109 volts. [1]

I didn't mind the little "buzz." I could actually "feel" the electricity flowing through the set, and I thought that was neat. Maybe if my feet were bare and standing in water, I wouldn't have thought so, though.

Being a curious child, I wondered what made those voices and the music come out of that little metal box. I turned it around, and peered through the pressed-wood composite board that covered the back. Inside, I saw several peculiar, rounded glass things, somewhat like little electric lights. But they weren't very bright, and they glowed a peculiar orange color. The glowing glass things gave off a little heat that I could feel rising up from them, warming the top of the metal case. And there was a smell — an unusual smell produced by this heating. I was completely fascinated by this little radio. I wanted to learn all about what made it work.

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Two years later, I was visiting a recently married uncle in Astoria, Queens. He and his wife shared a two family house with his mother in law. My uncle was known as a radio builder. I had previously discovered this by finding the workshop in the cellar of my aunt's and grandfather's house in Brooklyn, where he had built many radios, and where he had left many radio parts which I was able to take home.

The Way We Were, continued.

In my uncle's Astoria house, one room was set aside for his "radio stuff." Here were voltmeters, ohmmeters, signal generators, and a trove of radio parts. But what interested me more was a large oak desk, on top of which was a large, gray radio receiver.



Hallicrafters S-20R "Sky Champion"
Image: DXing.com

I had never seen a radio like this before. It didn't look like something you'd put in your kitchen. No, this was a man's radio; a radio that meant business. I couldn't resist fooling with it. I found the power switch and turned it on. The two calibrated dials lit up. I found the volume control, and after a suitable warm-up time, turned the knob higher. I didn't hear anything. Then, I discovered that there were headphones plugged in. I pulled the plug out, and the receiver came to life, blasting noise into the room.

Quickly, I turned the volume down, and started turning the big knob on the left that was marked, "Main Tuning." The dial moved across one of the bands, and suddenly, I heard voices. I thought they were radio stations, just like on my aunt's Arvin. They weren't. They were people talking back and forth, using a strange lingo. Some of the terms they used were "QRM," "QSL," and "QTH."

My uncle came in the room, and I got scared. Oh boy, I thought, I'm in trouble now! No, my uncle was friendly, and amazed that I had got the receiver working. I asked him about those strange signals I'd heard.

"Oh, those are hams," my uncle said.

"What's that?"

He explained in a minute or less what ham radio was, adding that to get on the air and talk to people, you had to get a license by passing a test. I knew all about tests from my second grade classes.

"You have to learn about radio, and how it works," he said. "You also have to learn the code. I have trouble with that, but maybe, if you practice enough, you can learn it better than me." Then, he reached up to a high bookshelf and handed me a book wrapped in brown paper. It had a yellow cover, and was the 1947 edition of The Radio Amateur's Handbook.

The Way We Were, continued.

"Here, study this. You can keep that book."

I opened the book, and leafed through its pages, gazing uncomprehendingly over schematic diagrams that looked like hieroglyphics, and gawking at odd looking things that looked like big glass bottles, gigantic things with rounded plates that might be used for slicing bread, and big coils mounted on white porcelain pillars.

A little while later, mom and I got in my uncle's car, and he drove us to the subway station. All the way home, subway and bus, my face was deep in that yellow book. For days, weeks, and months, I remained fascinated, and determined that someday, somehow, maybe a long time from now, I would study and get my license—even if I had to learn that Morse code stuff, too.

By the way, this uncle later did get an Advanced Class amateur license at the age of 70—after the code requirement was removed. His call was N2TSK.

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I remained fascinated by all things radio, and my dad was very supportive. As a kid in New York City during the 1930's, he had been a broadcast band DX'er, stringing wire antennas hundreds of feet long over the rooftops of apartment houses just to hear stations like WGN and WLS in Chicago and WLW in Cincinnati. Dad understood the lure of radio, and he always encouraged me in my interest.

Dad worked in lower Manhattan in those days, not far from "Radio Row." One day, he came home from work with a package for me. Inside were three gifts: A brown Bakelite crystal set made by Philmore, a one-earpiece headphone, and what he called a "code key." The key was a military surplus J-38. Dad bought these goodies at a place called Sun Radio on Canal Street.

Philmore was located in Queens. They had been making inexpensive radios since the 1920's. The crystal set dad bought was produced in several variations since the 1930's. Mine was the early 1950's version, and a picture of one can be seen below.

A raised portion of the Philmore crystal set had a small glass tube that looked like the bottom end of a test tube. Inside was a small chunk of galena, a natural lead sulfide mineral in crystalline form known to be a good detector. A fine metal wire, known as a "cat's whisker" poked into the galena.



Philmore crystal set
(without original glass detector tube)
Image: Universal Radio

The Way We Were, continued.

The cat's whisker had to be placed carefully in the galena for the best possible reception and, as I recall, it was already set in the right place for optimum performance. There were 4 Farnsworth clips on the Bakelite case; two on the left for the leads to the headphone, one on the right for the antenna lead, and the other for ground.

Dad and I went to what was then Goodman's Hardware store in Radburn, where dad bought a hunk of bell wire, two ribbed glass insulators, and a grounding strap. We strung the antenna wire under the eaves in the back of the house, and brought the end of the wire down into the basement, where we set up the crystal set on dad's workbench. The ground strap was clamped to one of the legs of the oil burner's fuel oil tank, and I ran a wire from it to the ground terminal of the Philmore.

There was no variable capacitor in the Philmore set. Tuning was accomplished with a metal slider that was moved over a scored, flat coil of enameled wire, thus changing the inductance, and hence, the frequency. I connected the headphone and began tuning. Wow! I could hear stations... lots of them, on this amazingly simple set. I was in radio heaven.

It's interesting to think that although I played with the J-38 key without appreciating its value at the time, I would someday use one, as a licensed radio amateur, but not for about another eight years.

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By 1957, and a ripe ten years old, I was totally hooked on radio. I wanted a real shortwave receiver like my uncle had, and continually pestered my dad to buy me one. I've already covered my experience with finally getting one in a previous article in The Resonator [2] so I won't repeat the whole story here. But here's a picture of my first shortwave receiver, which I built from a Knight Kit. It was called the "Ocean Hopper," and was sold by Allied Radio.

"Ocean Hopper" Receiver Kit
covers shortwave, longwave, AM broadcast

- Handy Plug-In Coils Cover 165 kc to 35 mc
- Employs Sensitive Regenerative Circuit
- Easy to Build—Simple to Operate—Fun to Own

One of the most popular kits ever offered, the world-famous "Ocean Hopper" brings you shortwave listening thrills unequalled at this amazingly low price. You'll hear foreign stations, ships and planes, Amateurs, local broadcasts, radio beacons—even calls on 500 kc, the international distress frequency for ships at sea.

Controls include Main Tuning, Bandspread, Antenna Trimmer, Off-On/Regeneration. Accommodates any 3-4 ohm PM speaker (not supplied) on strong stations. Includes AM broadcast plug-in coil—uses coils, at left, for reception of other frequencies. Comes with pyroxylin-covered wood cabinet with handy "trap door" for coil changing—wire, solder, and easy instructions. Less extra plug-in coils, headphones, antenna. Requires headphones and antenna, below. 6½x10½x5½". For 110-125 v., 50-60 cycle AC or DC. Shpg. wt., 6½ lbs.
83 Y 740. ONLY..... 11.95

83 Y 741. 165-540 kc. Only.....	79
83 Y 742. 1.65-4.1 mc.	
83 Y 743. 2.9-7.3 mc.	
83 Y 745. 7-17.5 mc.	
83 Y 744. 15.5-35 mc.	
83 Y 748. All 5. 1½ lbs. Only..	2.95
EACH,	
ONLY....	.65

83 Y 100. Antenna Kit. 1½ lbs. ONLY..... 1.03
59 Y 112. Single Headphone. 8 oz. ONLY..... 1.07
59 Y 110. Double Headphone. 1¾ lbs. ONLY..... 2.08

Image: Excerpted Allied Radio catalog, from KE6BB page on qrz.com

The Way We Were, continued.

For a comprehensive article on this receiver and its history, see Note [3] below.

1957 and '58 offered some of the very best years of radio propagation, due to high solar activity. Those days will probably never return in our lifetimes. Tuning the higher bands on my Ocean Hopper, especially 10 meters, it was common to hear local mobiles on Garret Mountain working plenty of DX, while running typically no more than 10 watt homebrew transmitters in their cars. I nearly flipped when I heard a station in Alaska and another from New Zealand coming in like locals. Anyone licensed back then, or SWLs from that period can tell you, "Ah, those were the days!"

At this time, I used to visit a kind of "flea market" with my parents on Route 17 in Lodi known as "Frankie's Market." Among the many stalls of vendors, there was one guy selling used books and magazines. It was there that I discovered recent, second-hand copies of QST and CQ Magazine. They were cheap—ten cents apiece, mainly, so I bought a fistful of them and read every page, absorbing as much as I could from them, and later asking one of my ham uncles to explain the content I didn't understand. He knew he would have a "future ham" in me, so he was very helpful and encouraging. My November column in The Resonator is my tribute to this uncle.

At the same time, I wanted to build a radio completely from scratch. Dad drove me to the Fair Lawn Free Public Library when it was on River Road. I found a book there, title now forgotten, that included a circuit for a one tube radio. It used a single 6H6, which is a dual diode. The circuit used one diode element as the detector and the second as an audio amplifier, with just enough power to drive a pair of headphones. Dad and I went to a place called Parts Unlimited in Paterson, long gone now, and bought all the parts required, including a small aluminum chassis. I worked on that radio for some days, and tried it, but could never get it working. Dad tried too, but it remained silent. Oh well, they don't always work, do they?

In 1958, I would get another receiver, this time as a gift from my grandfather. It was an early transistor radio, but not the first one made. The first was the TR-1, made by Regency Electronics. The transistor set I was given was also made by Regency, their model TR-44. It was an all transistor set in a black leather case, with a leather carrying handle, and copper knobs on each side, one for the ON-OFF/volume control, the other for tuning. It was a pretty nice radio, and one that saw a lot of use, especially when traveling. Here's a picture:



Regency TR-44 Transistor Radio ca. 1958
Image: eBay

The Way We Were, continued.

Although the TR-44 was perfectly capable of hearing the New York stations, it wasn't terribly sensitive. Transistor electronics was still in its relative infancy. About two years later, I would discover what a much better radio could do.

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I think it was in 1960, when I was twelve years old that my dad told me there was a guy who lived on Mason Place, just down the street and around the corner, who had built a Tesla Coil. I'd read an article about these things in a recent issue of Radio-Electronics magazine, but I had never seen one in operation. So dad made a phone call to Mr. Everett Clark, an RCA engineer and ex-ham originally from North Carolina, and we went to his home for a demonstration. Mr. Clark's Tesla coil used a 6L6 as the high frequency oscillator. I'll never forget how amazed I was to see that mysterious violet "flame" spewing forth from a large needle at the top of the foot long coil, and how the oscillations illuminated a large fluorescent bulb that Mr. Clark held in his hand some distance away from the coil. To me, it was nothing short of electronic "magic."

But Mr. Clark knew of my interest in radio, and he gave me an old radio that included a shortwave band; one I didn't have on my Ocean Hopper. It was an American Bosch model 505, which tuned standard AM, and 1550 kHz to 3300 kHz. This model was first manufactured in 1935, and used the old style 4, 6, and 7 pin tubes. I could hardly wait to get it home and start listening to these lower frequency bands.



American Bosch model 505

Image: https://www.auctionzip.com/auction-lot/American-Bosch-Magneto-Corp.-Radio-Model-505-Seri_6AC6359BB1/

I hooked up my old "under eaves" wire antenna to it, and started tuning. The first stations I heard on the shortwave band were hams on 160 meters ragchewing on AM phone. They weren't very strong,

The Way We Were, continued.

though, so I kept tuning, and soon found a very strange signal just above the 160 meter hams. It was a kind of “roar,” something like static, but coming in waves from a high frequency to low and then cycling again from high to low. This was the LORAN (Long Range Radio Navigation) transmitter operating on 1950 kHz, and operated by the U.S. Coast Guard. [4] There were several transmitter sites in the Northeast in those days, so I can only guess which one I heard, but my guess is that it was coming from the station on Nantucket Island in Massachusetts. [5] It was LOUD!

To hear what it sounded like, go to this link: <https://www.youtube.com/watch?v=LucMRstsfBY>

Tuning past the noisy LORAN transmitter, there was another strong signal, this one on 2500 kHz. It was the WWV Time Signal station from Washington, D.C.

In those days, they gave the time in Eastern Standard Time, not UTC. The first 30 seconds consisted of a single tone interrupted by a sort of “thump,” and starting at the 30 second point, they sent ticks like you’d hear on a clock. The voice announcement started at about 15 seconds before the next minute, superimposed over the ticks.

The announcement said, “National Bureau of Standards, WWV... When the tone returns, Eastern Standard Time will be....” (A.M. or P.M.) Then, at the exact time of the next minute, there was a single beep, and then the tone interrupted by a “thump” started again, and so on.

But most of my listening time was on the AM broadcast band, and this was my introduction to BCB DXing. I logged many “DX” stations across the eastern half of the U.S.A. and Canada, but never sent reception reports requesting QSL cards. That would come a few years later. I loved that radio, and don’t remember what became of it.

I found another one at an Antique Radio flea market some years ago, but it’s in need of restoration. By the way, the Model 505, unlike most consumer radios made in those days, did not use a “filament string.” It had a transformer power supply, like more expensive receivers.

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My next receiver was also a gift, this time from my closest ham uncle, W2VQD. But the events leading to that gift were the reason for my receiving it. A friend of mine from down the street came over one day in 1961 with a walkie-talkie that one of his other friends had loaned him. He showed me how it worked, and tried calling somebody he called “2 Queen,” who lived behind the McDonald’s on Broadway. He couldn’t raise “2 Queen,” so I suggested we go up to the attic, and maybe the additional height would help. But no, “2 Queen” never answered.

Anyway, I was intrigued by this, especially because no license was required to use one. Several years before this, I had heard stations on my “Ocean Hopper” receiver on the 11 meter band with strange call letters with four numbers in them, and my ham uncle had explained that they weren’t hams at all, but CBers.

The Way We Were, continued.

Nevertheless, it was still a tempting idea to be able to transmit and talk to people without having to take a test. Sometime in 1961, when my uncle visited my family, I showed him the Lafayette Radio catalog, and pointed to a transceiver that looked something like a ham rig, and asked what he thought of it.

"How about this one, Uncle John?" I asked.

"How about I get one of these and talk to people with it?"

LAFAYETTE HE-20 DELUXE CITIZENS BAND TRANSCEIVER

NOT A KIT! COMPLETELY WIRED!

HE-20 99.50 5.00 Down

- Foolproof Dependable Relay Switching
- 14 Tube Performance, plus 3 Diodes
- 4 Crystal-Controlled Transmit Positions
- 4 Crystal-Controlled Receive Positions Plus Tunable Receiver over all 23 channels
- "S" Meter With Switch To Measure Signal Strength and To Check on Wattage Input to Final
- Dependable Push-to-Talk Ceramic Microphone & Relay
- Adjustable Squelch Control
- Highly Effective Automatic Noise Limiter

MADE IN U.S.A.

The sensitivity and selectivity of this new transceiver equals that of the finest units available. Two or more of these transceivers will serve as an effective communication system over a distance of up to 20 miles, depending upon terrain and antenna height. Tunable Superheterodyne receiver section covers all 32 assigned channels with a sensitivity of 1 microvolt and provides for 4 crystal controlled receiving channels. 5-watt crystal-controlled transmitter operates on any 4 of 23 channels. Complete with rugged push-to-talk ceramic mike. Special bracket-handle allows installation in any location and any position. Size 12x5x8½"D. with 115V AC/12V DC Power Supply.

Lafayette HE20 advertisement

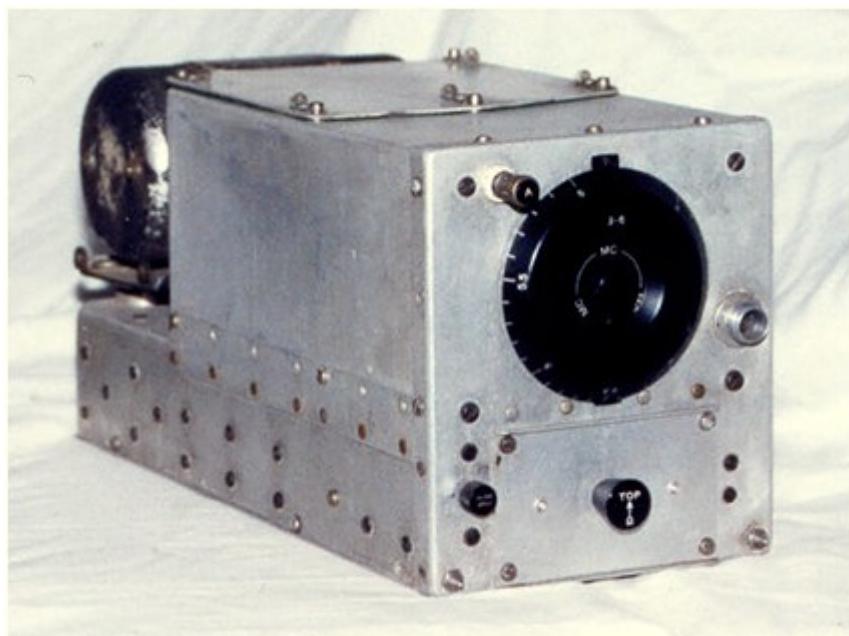
Image: Popular Electronics, January, 1961

My uncle's face turned crimson, and he nearly blew a gasket.

"NO! That's CB! You don't want THAT! Get your HAM license!"

Well, that was that. There was only one way to be a legitimate radio amateur, and that was with a real amateur license. But I wasn't quite ready yet. I had no one to teach me the code or coach me with the theory. So on his next visit, my uncle brought a receiver for the 40 meter band only, so I could get code practice. It was an Army surplus BC-454 Command Set.

The BC-454 was used by the Army Air Corps., and was part of the SCR-274N Equipment, consisting of several transmitters and receivers.



BC-454 Receiver (Original form, not yet converted for ham use)

Image: <http://www.tuberadio.com/robinson/museum/command/>

The Way We Were, continued.

In its original form the BC-454 covered 3 to 6 MHz, and was powered by a 28 Volt dynamotor that took its voltage from the aircraft electrical system. Ham conversions removed the dynamotor, and substituted a DC power supply to provide the necessary voltages to operate the set.

But this BC-454 was different—very different. The person converting this particular BC-454 was one of my uncle's friends and co-workers at the New York City Transit Authority, whose name was Charlie Scholpp, W2ABU. Charlie was one of the City subway system's best technicians, and what he did to the original design of the receiver is noteworthy.

Normally, it was the BC-455 that covered 6 to 9 MHz, and which was the model converted for use on 40 meters. But the entire 40 meter band occupied only about one inch of the circular dial, and that's not very selective. So Charlie modified a BC-454 to tune 40, but he made further improvements. First, he changed the coils, and re-aligned it for 40 meters. In the process, he managed to "band spread" the entire 40 meter band and slightly beyond to cover the whole dial—an astounding feat.

Of course, Charlie built a DC power supply for it, added a BFO (Beat Frequency Oscillator) to receive CW and SSB signals, added IF gain and RF gain controls and a "pitch" control, which was a small air trimmer capacitor to allow slight variation in the carrier frequency for tuning in CW or SSB signals. Then he added a special knob assembly for tuning that mated with the spline type drive on the unconverted receiver.

After Charlie's conversion efforts, the receiver now covered approximately 6990 to 7400 kHz. He even re-calibrated and re-marked the tuning dial to start at 7000 kHz and end at 7300 kHz.

As if that wasn't enough, Charlie did one more thing. If you look at the top of these Command Set receivers, you will note that there is an aluminum cover that permits access to the inside for tube replacement. There are no ventilation holes on this cover, so Charlie added them. He drilled rows of 1/8 inch holes in the cover to provide adequate ventilation.

How well did that receiver work? Very well, indeed. There was no crystal or mechanical filter, and it was a bit "wide," perhaps a few kilohertz, but for code practice (and SWLing), it was more than adequate. The RF and IF gain provided was more than sufficient to hear lots of stations, both amateur and non-amateur in that range, including all the big foreign broadcast stations. One of the most interesting to listen to in those days was Radio Amman, Jordan, down around 7150 kHz. The audio output was sufficient to drive a 15 inch woofer in a bass reflex speaker box I had built, with audio to spare. Amazing.

Just below 40 meters were several unusual stations, each between 6990 and 6998. One was the Associated Press station, WFL-something (with 2 numbers on the end which I've forgotten), that would send a channel marker followed by press using RTTY. The other was a CW station officially identified as the "U.S. State Department" (actually operated by the C.I.A.), sending a channel marker, and occasional encrypted message traffic. At the other end of the dial was CHU, the time signal station in Canada, originally on 7333, then 7335 kHz, and very loud here in New Jersey. They have since moved to a higher frequency.

The Way We Were, continued.

After getting this unusual receiver, I now had the impetus to study for my amateur license in earnest, but not, I confess, before spending too much time enjoying listening to hams ragchewing on AM and foreign broadcast stations. There were no SSB stations on 40 meters yet.

I waited until graduating from the 9th grade at Thomas Jefferson to start studying. School ended in early June of 1962, and I began to practice the code right away. The Novice theory was a cinch, so I didn't have to study more than a day or two to learn it. After about 10 days of code practice, I was pretty confident that I could send and receive at least 5 Words Per Minute, so I called my friend Dennis, WV2VXR, and said to ask his brother, Chuck, WA2OVK to administer the Novice test. He came over after another day or so, and that was that. One day in mid-July, there was a small envelope in the mail from the F.C.C. in Gettysburg, PA. Inside was a small piece of paper that said I was now WN2CST.

Now, I was a real ham, and I had to get a rig. Dad and I went to Lafayette Radio in Paramus to their "Ham Shack," where the salesman, Mike Reagan, then WA2ANY and now NI7T in California [6] guided me in choice of equipment. There was a whole room full of stuff, new and used, but dad was on a limited budget, so I had to pick from the used equipment. The transmitter I settled on was a World Radio Labs "Globe Scout," model 40A, made about 1955. It had a 6146 final and ran about 50 Watts input. It cost \$35.00. We bought one crystal, a re-ground ex-military FT-243 type for 7185 kHz, made by Texas Crystals. A Dow-Key antenna changeover relay, a 59 cent Johnson Speedx Bakelite telegraph key, 100 feet of copper wire (I already had insulators), 50 feet of RG-59/U coax (72 ohms), and an A.R.R.L. Logbook completed most of my station. The receiver was a bit tougher to decide on, though.

There was one model that was quite small. It was a Mosley CM-1, and I liked it. Yes, the same Mosley that made antennas. It resembled a Drake 2B, but in a white cabinet, but not nearly as good, as I discovered later. But it was too expensive. I couldn't exceed another \$50.00 to remain on budget. Mike, the salesman, suggested a Hallicrafters S-40A, which was just the right price. So, that's what dad bought.



Hallicrafters S-40A

Image: <http://www.rigpix.com/hallicrafters/s40a.htm>

The Way We Were, continued.

The S-40A was introduced in 1947, a slight improvement over the S-40, first sold one year earlier. Production ceased in 1949. [7] It covered AM broadcast through 44 MHz in four bands, AM and CW, and was also capable of SSB reception. [8] FM could also be received by “slope detection,” which means tuning slightly off the center of the carrier to one of the sidebands.

This was my Novice receiver, and an improvement over the converted BC-454 with better selectivity, and more bands. It served me well for a number of years, even as a General, but eventually developed a microphonic tube that would sometimes produce a loud “screech” that nearly made me jump out of my chair.

One nice feature was its reception above 10 meters, which enabled me to listen to local fire departments and the Paterson Police (KEB412) on “low band,” using wideband FM. There were also two unusual stations transmitting in that VHF range, KEA860, “Page Boy” and KEA627, “Air Call,” both located in New York City, and both early paging services. They transmitted long lists of 3 digit numbers, evidently signifying paid subscribers, alerting them to retrieve their messages. I wonder if anybody else remembers hearing these in the early 1960s.

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It was in November 1962, I think, when my maternal grandfather vacated his apartment in Brooklyn. It was the house where my mom, two sisters and their brother had spent much of their youth. For awhile, it was undecided where he might move. He first spent a few weeks at one uncle’s house in Long Island. Next, he came to our house in Fair Lawn, but for only a couple more weeks, before moving on again.

His move to our house was disruptive. He was given my room, and I was moved to the den, with no privacy, and Anderson windows that allowed no way for me to bring the coax to my antenna into this new “shack.” I was, therefore, QRT as long as he stayed — an intolerable situation for a new ham. Gramps was also a bit of an autocrat, and this didn’t sit well with my dad. After two weeks, dad sent gramps packing again. He went back to Long Island, to another family, then another, where he finally remained for the rest of his life.

But gramps left behind some personal items, including a large antique console radio. It was, as far as I can tell, a Philco Model 70 Highboy, made sometime between 1929 and 1931. It was a 2-band set, covering the standard AM broadcast band and a shortwave band that tuned approximately 1700 kHz to maybe 3300 kHz, just short of the 80 meter ham band.

The Model 70 in the picture has one slight difference from Gramps’ radio. On the one Gramps left behind, there were two sliding doors that, when closed, covered the front part, but I cannot find this version online. It was a big beast of a radio, but not bad as far as performance. The AM band was pretty good, but not great, and the shortwave band was fair, but usable.

The Way We Were, continued.



Philco Model 70 Highboy

Image: <https://picclick.com/Vintage-PHILCO-Model-70-Superheterodyne-Highboy-Project-362058002860.html>

The first stations I heard there were hams on 160 meter AM, a roundtable of stations from New England. Just above 160 meters, the LORAN station and WWV, were marine stations on about 2600 kHz. These were skippers of fishing boats and tugs ragchewing on AM mode. The fishing boat skippers used language that was quite salty. If my mom was nearby, I had to quickly turn down the volume, lest she be scandalized by what she heard.

By December, I was back in my own room, and back on the air. I decided to save at least part of Gramps' old radio, so I disemboweled it, sawing off the wooden part covering the chassis as a front panel, and using it occasionally to listen in on 160.

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The Way We Were, continued.

By this time, I had been given yet another radio, this one also covering the AM broadcast band, but also FM and one shortwave band. It was a German import set made by Körting, and known by the model name "Billy." It was typical of German radios at that time — all plastic, well made, and both sensitive and selective. There was also a "phono" input jack that permitted using the set as a phonograph amplifier.



Koerting "Billy"

Image: <https://audio.aanbodpagina.nl/vintage-k-rting-radio-model-billy-21020>

"Billy" was a very nice radio, and one that was great for broadcast band DXing. The shortwave band was good, too. Unlike typical American radios, it used a solid state, full wave rectified transformer power supply. The tubes were all European types, most having U.S. equivalents. I never had to replace any, though. The frequency range on shortwave was 5 through 18 MHz, AM only, of course.

Once, I borrowed a Heathkit "Twoer" and an Ameco CN-144 Nuvistor converter for 2 meters from FLARC, and used the "Billy" as a tunable IF from 14 to 18 MHz to cover the entire 2 meter band. It worked beautifully. In 1963, I started sending SWL reports to AM broadcast stations using "Billy" as my receiver. The first QSL I received was from WPRO in Providence, Rhode Island. "Billy" provided many years of enjoyable listening, finally replaced by a stereo system around 1969.

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But my insatiable curiosity for all things radio, and all frequency bands, drew me to the Fair Radio Sales catalogs, and a curious receiver they were selling. It was a BC-1206, made by Setchell-Carlson. This was a military aircraft receiver requiring 24 to 28 Volts DC to operate. It was a small receiver that mounted behind the instrument panel of an aircraft.

The Way We Were, continued.



BC-1206 Receiver

Image: https://www.radioblvd.com/WWII_Communications_Equipment_Part2.htm

I'd always been curious to know what could be heard below the AM broadcast band, especially since my ham uncle had mentioned activity down there on "longwave." The BC-1206 was offered by Fair Radio as a "Beacon Receiver." It was a superhet that received AM only on frequencies from 195 to 400 kHz. The tubes were all Loktal type, mostly 14 Volt filaments except for the audio output tube, which was 28 Volts. The AF output was designed for headphones. This was a "range" receiver only, using the LF beacons to indicate roughly what airport was within range, but not for homing. I'm not sure what type antenna would have been used with it, probably a very short wire type, but it would not have been an RDF loop. [9]

If you've never listened down on LF, beacons are unmanned non-directional stations typically running 50 Watts, continually transmitting a 2 or 3 character identifier in modulated CW. Even pilots that didn't know code could identify them because aircraft "sectional charts" (maps covering flight paths around the world) always identified these stations by their identifier with their corresponding Morse code letter symbols. For example, "EWR," which used to be the identifier for Newark International Airport, would show the location of the station, its "EWR" identifier, and next to it or beneath it, the Morse symbols as follows:

EWR

•
• — —
• — •

The Way We Were, continued.

Anybody could have understood that. I began monitoring these while still a Novice, and logged many of them, most of which are now gone from the airwaves. One very strong station was “PNJ” on 348 kHz, which sectional maps identified as standing for “Paterson New Jersey.”

Years later, from its coordinates, I discovered it was actually located on Goffle Road in Hawthorne. Others that were frequently heard were “IDL” at Idlewild Airport, “JF” at JFK, “CAT” located at Chatham, New Jersey, and “AB” at Stewart Air Force Base in Albany, New York.

But the strangest signal down there, and quite strong, was “TUK” on 194 kHz. This was the Consolan station located on Nantucket. The signal consisted of a series of low frequency beeps followed by its CW identifier. Later, transmissions included weather warnings transmitted by voice. Consolan was an early navigational aid, decommissioned many years ago, and later replaced by LORAN-C. [10]

A brief description of the Consolan station at Nantucket can be found at Note [11], and a comprehensive technical explanation of how Consolan worked can be found at Note [12].

I used this little receiver for many years, eventually replacing it with more sophisticated equipment for monitoring LF and VLF. Finally, I cannibalized the receiver for parts, and after doing so, I played “taps” to honor its years of faithful service. [13] Then, I sold the 28 Volt power supply at a hamfest.

Sadly, I also sold that magnificently converted BC-454 receiver, too. I wish I hadn’t. It was a masterpiece of ham ingenuity,

- END OF PART 1 -

Until next month, 73,

Fred W2AAB

NOTES:

[1] “Arvin Models 444, 444A Schematic & Parts List,” November, 1946 Radio News article, at:
<https://www.rfcafe.com/references/radio-news/arvin-444-november-1946-radio-news.htm>

[2] Belghaus, Fred W2AAB, “The Story of a Receiver,” The Resonator, July, 2020.

[3] Lee, Bart, x-WPE2DLT, “Ocean Hopping Dreams,” California Historical Radio, at:
<https://californiahistoricalradio.com/wp-content/uploads//2011/11/CHRSOceanHopper.pdf>

[4] Wikipedia article, “LORAN,” at: <https://en.wikipedia.org/wiki/LORAN>

[5] Wikipedia article, “Category: Loran-C Transmitters in the United States,” at:
https://en.wikipedia.org/wiki/Category:LORAN-C_transmitters_in_the_United_States

[6] “NI7T” Bio at: <http://www.ni7t.com/NI7T%20-%20BIO.html>

The Way We Were, continued.

[7] "The Hallicrafters S-40A," The VE7SL Radio Notebook," at: <https://qsl.net/ve7sl/s40.html>

[8] "Service Bulletin for Model S-40A," at:
https://w5rkl.com/wp-content/uploads/2015/02/Hallicrafters_S40A-HF-VHF-Reciever_Service-Manual.pdf

[9] (VK2BV), "BC-1206 Range Receiver," Kurrajong Radio Museum," at: <https://vk2bv.org/archive/museum/bc1206.htm>

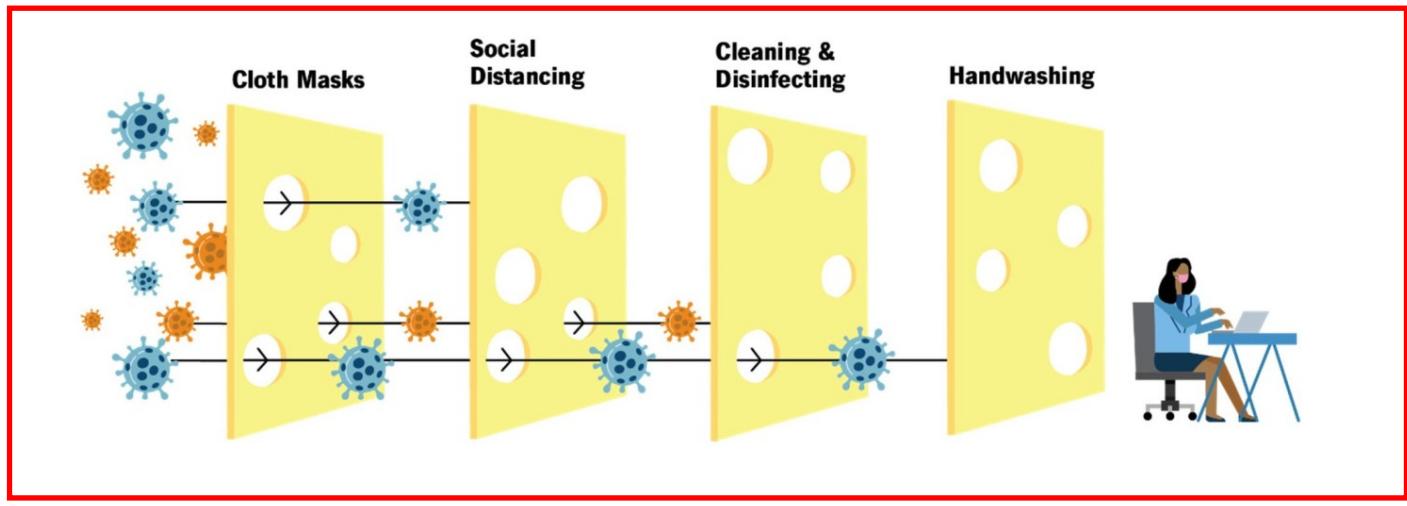
[10] Piopolo, Dana, "[AF] NDB Sites," at: <http://www.radiolists.net/pipermail/af/2007-May/004129.html>

[11] Magnuson, Waldo, "[Hallicrafters] S-118 and Consolan Signals," at: <http://www.qth.net/pipermail/hallicrafters/2005-March/009366.html>

[12] Robberson, Elbert, "Consolan – New Navigation Aid For Small Boats Needs Only a Surplus Long-Wave Receiver, and Some Simple Modifications You Can Make," Radio-Electronics, March 1961, p. 54, at:
<https://worldradiohistory.com/Archive-Radio-Electronics/60s/1961/Radio-Electronics-1961-03.pdf>

[13] Actually, no, I didn't really do that. I just wanted to see if you were paying attention.

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A Ham Radio Christmas Carol

Traditionally, the apology goes at the end. But I have moved it here, up front, due to the exceptional liberties I've taken with one of the world's most beloved Christmas stories.

Dear Charles Dickens,

I mean no offense. It's your story alright, although it might be hard to recognize. I'm a ham operator you see, and, well, we hams have our own perspective. I'm relating a dream, as I dreamt it - that's my alibi. Thank you for the inspiration, wherever you might be. Maybe we could have a QSO sometime?

You may recall in A Christmas Carol, Ebenezer Scrooge is visited by the ghost of his long deceased business partner, Jacob Marley, who warns of pending visits by three spirits. On board so far? Good.

In my dream, the business partner isn't Marley's ghost, its Mosley's ghost. Mosley looks a lot like Hiram Percy Maxim. Mosley warns me I am about to be visited by three spirits. The spirit of ham radio past, the spirit of ham radio present and the spirit of ham radio to be. Mosley tells me it could be a rough ride and I better pay close attention. Unlike Marley's ghost, who appeared in chains, Mosley's ghost was covered in Noalox. In my dream I sent Mosley's ghost an SWL card via the bureau.

I was looking forward to the visit from the spirit of ham radio past and it did not disappoint. The role of the spirit was played by Bill Halligan, founder of Hallicrafters. I've never seen a picture of Bill Halligan, so in my dream he looked like Art Collins. There might have been some wish-bias going on – Collins gear was wildly out of my reach during ham radio past. Bill showed me myself as a teenager; just getting started in ham radio. There was my first shack (Figure 1) and two of my first antennas (Figure 2). A snow covered vee was anchored to a hole I chopped in my mom's roof. The roof leaked after that. My attic shack was freezing; not warmed much by the tubes in my DX-20 and SX-110. There were sunspots galore – a distant memory gratefully refreshed. But Bill had something more important to show me than the fun times I'd had as a crystal-controlled novice. He showed me what ham radio past WAS.

Hams were faultlessly polite on the air. And just as polite off the air too. AM carriers caused a lot of QRM, but none of it was deliberate. The FCC was for real. You could get a "pink ticket" for any number of infractions. There was enforcement. The Citizens Band had just begun. CB'ers used callsigns assigned by the FCC. They all ran 5 watts and they stayed put on 11 meters. Everyone knew CW – you had to, to get a license. Everyone built things; antennas, transmitters, receivers. QSTs were saved until bookcases collapsed. No one, ever, discussed religion, politics or their financial situation on the air. That happened without much thought – it was obviously rude to do such a thing. Besides, ham radio was about ham radio.

Ham radio past was everything a person could want. It was fun, educational, and exciting. It had a strong social component too. There were lots and lots of radio clubs. Everyone went to Field Day and drank coffee, beer and Nehi Orange.

Just as I was enjoying ham radio past, spirit Halligan vanished in a flash of blue lightning. The smell of ozone hung in the air.

Soon, the spirit of ham radio present appeared. The role was reprised by Bob Heil. At that point Bob Cratchit and Tiny Tim also appeared but in my dream they had changed form. Cratchit's name was Hy Cushgain and his

Around the Shack • Holiday Edition, continued

good-natured but invalid son was named Heath. Tiny Heath was a sorry figure, ailing to the point of dropping out of ham radio. Cushgain was still active but growing weary. As always, hams were Scrooge-like.

Cushgain and Heath's ailments aside, I was doing fine in ham radio present. I had a good station and central heat and air conditioning. My callsign was short. But as before, spirit Heil told me it wasn't about me – he had come to show me what ham radio present WAS.

Things had changed! Technology had leapt ahead. HF rigs didn't drift anymore and high power was easily attainable. CW was now optional, as was a log. Digital modes had arrived and ham rigs and computers were tightly integrated. Manned and unmanned artificial satellites were on the air! Computers made QSOs with other computers with negligible human interaction on HF, VHF and even UHF, with text replacing voice.

A big change had occurred in operating style. The barriers to entry were gone. Demonstration of technical and operating skill was no longer required to obtain a license, though it could be argued it was needed more than ever. You could buy all your gear, antennas included.

There was a dark side. Stretches of spectrum like 75 meter phone were occupied by the rudest of the rude. Denizens of the dismal frequencies were abusive toward one another and anyone who wandered by. Deliberate QRM was present and running excessive power was, for the most part, not looked down upon.

The FCC was a hypothetical. Hams were left to license themselves and police themselves without the means to do so.

Still, overall, ham radio present was fine. You could have a nice rag-chew style QSO if you wanted one. QSOs were plentiful on CW, SSB, VHF and, strangely, on AM. Like vinyl records, AM had returned and was in the hands of good operators. Winlink, DSTAR and VHF netting had taken off and ham's ability to aid in an emergency had never been better.

Ham radio was keeping pace with technology – a good thing. New skills flourished. Using satellites required skills and those skills were rewarded with memorable QSOs. Old timers from ham radio past mingled with those from the newest parts of ham radio present with mutual curiosity more than animus. It is said there are two kinds of companies: those that are changing and those that are going out of business. Ham radio present was changing much faster than ham radio past had, but it was that or become irrelevant. Spirit Heil was right in the middle of it too. He knew just what to show me.

I was feeling a little behind at that point, then noticed collecting gear from ham radio past was a popular ham radio present pastime. A lot of it was brown from cigarette smoke.

Ham radio present had something for everybody. Gear ranged from boat anchors to advanced DSP and SDR radios. Frequencies ran from 137 KHz to terahertz. EmComm, DXing, contesting, award chasing, experimenting. DIY construction was alive, much of it centered on antennas. Modes? CW, AM, SSB, FM, ATV, SSTV, innumerable digital formats with more on the way.

With all those positives however, something was bothering spirit Heil and myself. The 75 meter phone mess was on my mind. It needed attention and the FCC was AWOL.

With trepidation I wondered what ham radio to be might be like. The answer came soon enough. Spirit Heil vanished in an ear-splitting cacophony of distortion. A ruptured speaker cone was all that remained.

Around the Shack • Holiday Edition, continued

Then, the last apparition arrived – the spirit of ham radio to be. The spirit took the form of Wayne Green, W2NSD/1.

My station wasn't a station anymore – it was a box with no knobs. The box had a solitary connection – a cable that carried power and data to another box. I had no antennas any longer – I didn't seem to need any. Wayne helped me get a handle on it all. My featureless boxes were hooked to other boxes, far, far away. The connection wasn't via RF. The boxes were connected via the interwebnet. The distant boxes were hooked to antennas, so there was still some RF, somewhere. I could get DXCC credit for contacts made with "my rig," located 3,000 miles away. That sure seemed odd.

Spirit Wayne kept the script on track of course – it wasn't about me or my DXCC total – it was about what ham radio to be WAS. It was unrecognizable to an old timer. The "Interwebnet of things" was ubiquitous. Some ops were emitting RF, but many were not. Home stations, ones consisting of a rig and on-site antenna(s) had become rare.

The FCC had dissolved. The ARRL was still around, its primary function being the issuance of licenses for a fee some thought exorbitant.

The loudmouth crowd on 75 meters had spread to 40 meters, but they were still held in contempt by all but themselves. That was good – sort of.

Hy Cushgain and poor Tiny Heath had passed away, leaving a sorrowful void for those with memories of ham radio past.

I'd seen enough! Wayne, be on your way! I made up a conspiracy theory about Wayne turning into a Chihuahua if he stayed any longer and he believed it (that was easy). Wayne split the scene but remnants of spirit Wayne lingered for a long time in the form of moldy magazines.

My Ham Radio Christmas Carol dream was coming to an end.

Mosley's ghost appeared once more and I asked the question Scrooge had asked of Marley. Must it be this way? Is the future set in stone? What can be done to make the future not be what I had just seen the future to be?

Dickens had it easy. Scrooge changed and so the future changed as well. But, A Christmas Carol is a novel and Scrooge was one person. Ham radio isn't fiction and there are a lot of people involved.

Mosley's ghost answered my question as best he could. "Lead by example," he said. "Be faultlessly polite. Never sink to the level of the miscreants. FOLLOW THE RULES. Limit your power and your language. Learn what makes it work and teach others. Ham radio follows society to a degree. Societies swing back and forth." "Keep the faith," Mosley told me. "A more civil society is around the corner. Incorporate civility into ham radio and all will be well. Ham radio is evolutionary - the new builds on the past. Learn it all! Do it all! Embrace change!"

Mosley's ghost dropped some hints about what ham radio to be might be like if we all kept the faith. Tiny Heath didn't perish after all – he started making kits for beginners, just as in times past. True to his roots he had a side business making beanie propellers. Hy Cushgain was taken in by an affable and generous fellow named Marty, who ran a mighty fine company.

The 75 meter phone guys had mostly died off from cirrhosis of the liver. Some of the rest were too slow to

Around the Shack • Holiday Edition, continued

figure out how to hurl insults digitally. Still others lost interest. Attention, the fuel that keeps folks like that going, had disappeared. Nobody cared about their antics any longer. The stragglers wound up in old-folks homes doing the chicken dance.

My dream ended on a hopeful note. If we listened to what Mosley's ghost had said, it would be okay.

As I awoke, I heard Tiny Heath exclaim: "God Bless us Every One!"

With Optimism and Hope for our Beloved Hobby and 2021,

Merry Christmas, Happy Holidays from N4GG and family....

73,
Hal N4GG
December, 2020



Figure 1: N4GG First Shack [with WA2QPW]

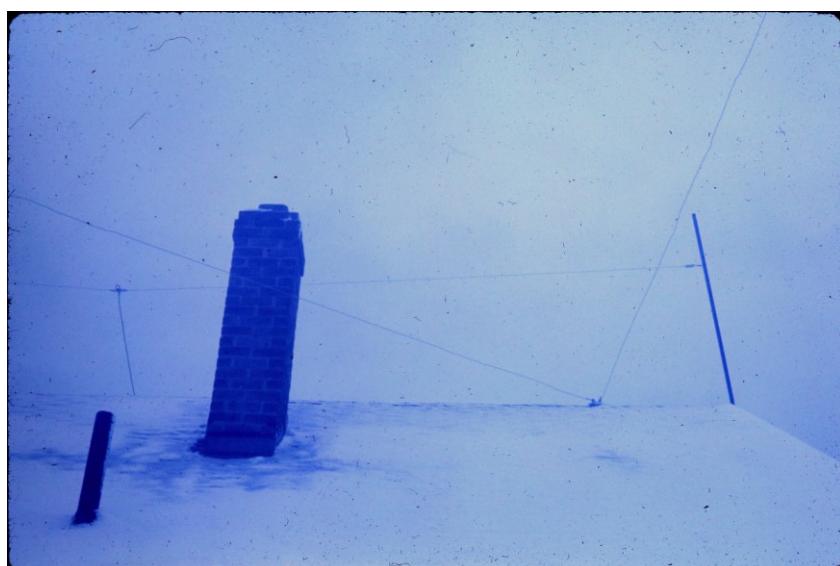


Figure 2: N4GG First Antenna

What is it? —November 2020
Answer to last month's question



Image: Photo by Paul Signorelli, WØRW

Did you get this one?

Yes, it's an early transistor. More specifically, it's a 2N57, with metal case cut open to view the internal elements.

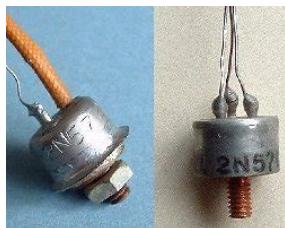
The 2N57 was developed by Honeywell and first sold commercially in 1954. [1]

NOTE:

[1] Knight, Joe, "A Survey of Early Power Transistors," *Semiconductor Museum*, at:
http://www.semiconductormuseum.com/Transistors/LectureHall/JoeKnight/JoeKnight_EarlyPowerTransistorHistory_Honeywell_Index.htm

73,

Fred W2AAB



**FLARC Member Count
Continues To Grow**

Despite the pandemic, FLARC continues to maintain its membership. So far we've added seven new members since dues closed in May. As we go to press the number is now at or about 164 - just 3 fewer than our 2019 close of 167.

164!!

**PAY YOUR
DUES NOW!**

and help keep that number for 2021.

Please make checks (\$25) payable to "Fair Lawn Amateur Radio Club" and send them to:

**Bruce Kalogera NJ2BK
163 Meadow Lane
Secaucus, NJ 07094**

2020 Near and Far Net Check-Ins

Now completing its third year, the FLARC *Near and Far* net is chugging along each week. Here is a list of our check-ins beginning on New Year's Night, in no particular order. Mondays at 8PM on the repeater. See previous pages for more!!

Who did we miss in 2020?
Why not stop by in 2021??!!

Call	Name
KD2UXG	Saurabh
K3DQB	Walt
JA2SYJ • Nagoya, Japan	Mac



Connecting to Ground Rods

Here is a recommendation from my Tips and Tricks memory bank.

Ground rods are used for two purposes. One is as part of a lightning protection system, the other is to provide a ground connection for small signals. The latter includes the ground needed at the base of a K9AY loop, at both ends of a Beverage or at the connection point of a radial field.

This article is about small signal grounding, NOT LIGHTNING PROTECTION! Connecting to ground rods for lightning protection requires very low resistance connections to handle the large amount of energy contained in lightning strikes.

For small signal grounds, I use 4 and 8 foot copper-plated steel ground rods. I have sometimes found these at The Home Depot and they are always available at electrical supply companies. For my K9AY loop, I've been using a 4 foot ground rod and it's proven to be sufficient. An 8 foot ground rod might be better depending on the characteristics of the ground local to the rod.

So, how to connect to the top of a ground rod? Most of us reach into our junk box or head to the home goods store and buy a clamp made for that purpose. Those work fine – most of the time. I have had them come loose over time however and sometimes corrode due to dissimilar metals. The good ones are all brass with brass screws. The junk ones are poor quality brass with zinc plated screws. Those are guaranteed to fail over time.

Here is my solution: Solder the ground wire to the top of the ground rod. That sounds difficult to do and it is if the rod is already in the ground. The rod is an efficient heat sink and resists getting hot enough to solder to.

Soldering a wire onto a ground rod pre-installation is possible however - while the ground rod is on the workbench. With a wire brush, sandpaper, or a wire wheel on a bench grinder (my method), shine the end of the ground rod nice and bright. Wrap 3 or 4 turns of the wire of your choice (I use #14 house wire for my K9AY connection) and solder. Even when not in the ground a ground rod is a good heat sink; you will need a lot of heat. Soldering pencils and irons are out. It's a job for a propane or butane torch (see Around the Shack, June, 2018).

Figure 1 shows the ground rod at the base of my K9AY loop. The wire was soldered to the top of the rod 15 years ago and appears to have many more years of life left in it. The connection was made with typical 60/40 lead-tin solder. Lead-tin solder connections will, however, deteriorate outdoors. This is particularly true for connections in the ground (think buried radials). If 20 or more years of life is desired, then silver soldering is the way to go. That requires getting the ground rod even hotter than what's required for lead-tin solder however and may not be practical with a homeowner's propane torch.

At that point, a first-rate clamp may be your best choice.

That's it for this month.

I note "Christmas stuff" has been in the stores since 45 days before Halloween.

My Christmas shopping day, December 24th, is around the corner.

Merry Christmas and Happy Holidays to all.

With luck, 2021 will be a great year for DXing and life in general.

73,
Hal N4GG



Figure 1

DMR Special Interest Group Update

The DMR SIG is going well.

We are still using TalkGroup 310015 on Tuesday evenings, but the time has changed.

We now start at 19:00 to always be done before the NorthStar Digital Net, which is at 20:00 on TalkGroup 31630. To get onto either of these nets, a HotSpot is required at this time.

Those going from one net to the other, don't forget to disconnect from one TalkGroup by switching to TalkGroup 4000 before proceeding to the new TalkGroup. This is a DMR HotSpot thing. Come join the DMR SIG to learn more.

We hope that FLARC will soon have its own official DMR TalkGroup.

Those interested in learning about DMR, join the DMR SIG. There are many in the DMR SIG willing to help get you started.

For those interested - join in on all the DMR excitement!

Contact Bob H. KD2BKD@optonline.net for information on joining.

Or just go to the club website FairLawnARC.org and use the "Join Special Interest Group(s)" link on left.

Bob KD2BKD
Moderator • FLARC DMR SIG



Radio Monitoring Special Interest Group Update

Tuning The Bands

by Dave Marthouse N2AAM

The FLARC monitoring group held its first *Kawfee Tawk* session on October 30.

I would like to thank Paul Walker for doing a splendid job presenting an interesting aspect of the broadcast band DXing part of our hobby, as well as the over 50 people, members and guests, who made our first event a success.

I would venture to say that 99% of those who read this will probably not get the opportunity to DX in the unique location that Paul has done - but there is a way to do something similar from the comfort of your shack.

A few philanthropic DXers have set up remote receivers at great DX locations throughout the world that are accessible free to all who are interested.

I would like to mention several of them here.

They are located in high arctic Norway and Iceland.

Anyone on the Internet can access them using the Firefox browser. Internet Explorer does not work on these sites. Click on one of the links below.

- <http://kongsdr.ddns.net:8074/>
- <http://tangar.utvarp.com:8073/>
- <http://arcticsdr.ddns.net:8073/>

After clicking on one of the links you will be taken to a software defined radio that you can control using your keyboard and mouse. Just follow the instructions and you will have a fun time DXing from a few of the prime DX locations in the world, in real time.

Continued on page 48.

DMR Worldwide Net

by Bob Holstrom, KD2BKD

For those who like nets, this must be the largest and, most likely, one of the longest. It is the Worldwide DMR Net every Saturday at 17:00 UTC, which is 12:00 noon our time.

The DMR Worldwide Net is available via repeaters in Canada, USA, Germany, Australia, South Africa, New Zealand, Switzerland, Spain, Austria, Finland, Sweden, and many other countries.

The talkgroups to find this net are the Brandmeister Worldwide Talkgroup (TG 91) and Worldwide Talkgroup (TG 1). Access is also available via DMR personal HotSpots. The reason for this net is to test the DMR network capacity weekly throughout the world. This is a controlled net called out by region by net control.

Net control operators take turns each week running the net from all around the world. Some net control operators are from UK and many from USA. They are looking for net control operators in Europe, Asia, Central and South America currently. Those checking in are asked for their call sign (phonetically), name, and location only. There is no additional time for more information with the 300+ check-ins.

The total time for this net is 2+ hours. Check-ins are done first from East Asia (Japan, South Korea, Taiwan, China, Thailand, Philippines, etc) then going to the middle east (Israel, Turkey, Saudi Arabia, United Arab Emirates, Oman, etc). Next comes the British Isles with Ireland, North Ireland, Scotland, Wales, England. After that, call outs for the Continental European countries one at a time – for The Netherlands, Belgium, Spain, Portugal, France, Italy, Luxemburg, Germany, Switzerland, Liechtenstein, Austria, Czech Republic, Slovenia, Hungary, Slovakia, Czechoslovakia, Poland.

The progression goes to Eastern Europe with Romania, Ukraine, to Khalistan. Then up to the Nordic Countries of Finland, Sweden, Denmark, and Norway. After that callouts for South America, Central America, then North America.

When getting to the USA, individual call zones are called out for check ins.



DMR-MARC

via DMR personal

Covid-19 and a Year of FLARC Public Service

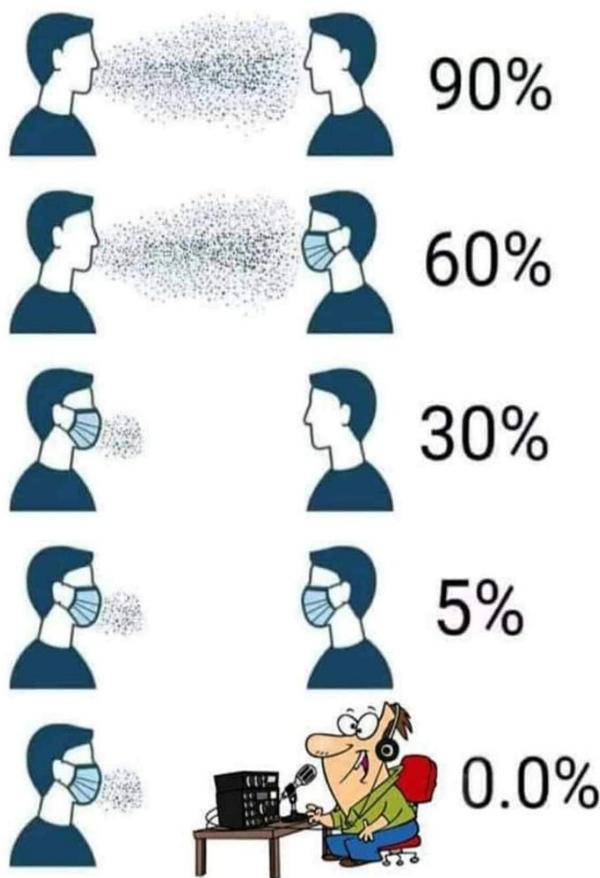
You probably have noticed that with each month's Resonator there are increasingly a number of graphics (such as the one below) that discuss personal safety during this pandemic.

It has not been by accident. Staying safe is an imperative and hopefully these little fillers have been reminders for you stay alert and healthy.

It is also important to remember and thank all those health care, emergency and other essential workers for their hard work and sacrifice during the pandemic.

Several of them are also FLARC members!

Keep The Covid-19 Transmission Rate As Low As Possible



Farewell To Volume 5

Thus we close the final issue of the 2020 Resonator series. My thanks to all who have contributed on a monthly basis – W2AAB, W2ABE, NP4H, K2MOB, K2BKD, K2KLN, N4GG and many other contributors who have provided timely copy. Thanks to others for submitting the many, many pix. And a thanks to all our monthly profiled members who have made deadline and contributed much to the life of this club. Who have I forgotten??

Again, a special thanks to my proof-reader (sp!) Jim W2JC who stays picky and keeps me honest and grammatically correct. And he does the final formatting and visual layout. He reads a lot of copy... a lot! Any errors that remain are mine and mine alone. We have come a long way in 60 issues... pushing almost 500 pages of club-generated content during 2020. We've received many kudos about this newsletter over the year. Thanks to all of you it's easy.

**Best wishes for the New Year.
Thanks for reading each issue!**

DE Ed WX2R

2020 FLARC Field Day Scores

According to the December issue of QST, FLARC scored a total of 8,916 points for this year's Field Day.

What did it mean? Who knows, as Covid-19 changed the rules and made the traditional club event meaningless. It's an operating event anyway, yes?

Nineteen FLARC club members took part in this year's "unusual" Field Day event — mostly 1D with a few in socially distanced groups.

They were: KB2ESE, WD2LT, KA2YRA, NP4H, K2KCC, W2AAB, W2TTT, ALØY, W2PX, K2MOB, N2SU, K3KKH, KM2C, KB2MDR, K2FTP, W2MSA, K2PJC, KG2AE and NO2X.

Let's hope for a "back to normal" 2021.

HOW TO WEAR A NON-MEDICAL FABRIC MASK SAFELY

who.int/epi-win

Do's →



Adjust the mask to your face without leaving gaps on the sides



Cover your mouth, nose, and chin



Avoid touching the mask



Clean your hands before touching the mask



Inspect the mask for damage or if dirty



Pull the mask away from your face



Store the mask in a clean plastic, resealable bag if it is not dirty or wet and you plan to re-use it



Remove the mask by the straps when taking it out of the bag



Wash the mask in soap or detergent, preferably with hot water, at least once a day



Clean your hands after removing the mask

Don'ts →



Do not wear the mask under the nose



Do not remove the mask where there are people within 1 metre



Do not use a mask that is difficult to breathe through



Do not use a mask that looks damaged



Do not wear a loose mask



Do not wear a dirty or wet mask



Do not share your mask with others

A fabric mask can protect others around you. To protect yourself and prevent the spread of COVID-19, remember to keep at least 1 metre distance from others, clean your hands frequently and thoroughly, and avoid touching your face and mask.



World Health Organization

**An Inside Look At Trans World Radio
Kicks Off 2021 FLARC January 15th
‘Kawfee Tawk” Series**



What does a million watt transmitter look like? We'll get an inside look at one of the largest shortwave broadcasters in the world as **Trans World Radio International** President Lauren Libby WØLD takes us on a global tour of their transmitters and broadcast and media operation that speaks to 175 countries in 230 languages daily.

**The presentation will be via Zoom
on Friday, January 15, 2021
beginning at 7:30 PM EST (2330 GMT)
and is open to all.**

Lauren has been a licensed Radio Amateur since age 12. He has held the amateur call signs WNØLSH, WAØLSH, KXØO, V31JO, CO2/KXØO, PJ4V and WØLD. He has been to over 90 countries visiting many other international amateur radio operators.

Lauren has been an active VHF/UHF amateur since he has been licensed, holding WAS/WAC on 2 meters and WAS on 6 meters, as well as VUAC on 6 & 2 meters, 2.3 Ghz and 3.4 Ghz. He has served twice as president of the Central States VHF Society. He was awarded the Mel Wilson award for service to the VHF/UHF community. He was elected to membership in the Radio Club of America. Lauren chaired the VUAC committee of the ARRL in the 1990s and in the 2000s.

This presentation is part of the **FLARC Monitoring Special Interest Group** program.

All are welcome to join via groups.io.
[Sign up page for FLARC Special Interest Groups \(fairlawnarc.com\)](http://fairlawnarc.com)



A Look Back

Each year in December *The Resonator* goes back into the FLARC archives and provides some sense of the past with today.

This year our special thanks to Stan KC2K for providing the club roster on the following page.

What's historic about it is that it shows where the club was **exactly 50 years ago in 1970**.

Twenty members (including Stan) just 14 years after founding.

Thanks for a great piece of history!

Fair Lawn Amateur Radio Club RECEIVED

12-56 River Road

MAR 25 1970

Fair Lawn, New Jersey 07410

RECREATION DEPT.

March 21, FAIRAWN, N. J.

Noted L

Mr. Monte Weed, Superintendent of Recreation
Municipal Building
Fair Lawn, N. J.

Dear Mr. Weed,

In response to your request which I received via Frank Leonard, here is a list of the active membership of the Club.

✓Richard Semel, President	Bob Killi
✓Jeff Gottesman, Vice-President	Pete Balazy
✓Stanford Solms, Secretary	Mark Wenig
✓Star Sanders, Treasurer	Ken De Luca, Vice-Pres
✓Frank Leonard, Advisor/Recording Sec.	Ken Antoniuk
✓Walter Stone	Tony Giszak
✓Robert Stone	Howard Robin
✓Jerry Klein	Phil Kravitz
✓Elliot Penofsky	Tim Garry
<i>Tim Solms, Pres</i>	Sal Ferraro, Corresp. Secy.

If there is any additional information needed, please let me know.

Cordially,

Stanford Solms
Stanford Solms, Secy

*your truly
in full force and standing*

John S. L.

PERIODIC TABLE OF MAJOR AMATEUR RADIO CONTESTS

2021											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2 1800Z ARRL RTTY Roundup	3 2400Z NA Sprint CW	7 0000Z 6 0400Z ARRL DX SSB	7 2400Z 3 0900Z SP Polish DX	1 1500Z 7QP/N/IN/DE New England QSO Parties	2 varies 5 1200Z SEANET Contest	6 1200Z 3 1400Z Marconi Memorial HF	4 1400Z 7 1600Z NAQP CW	7 0600Z 4 1400Z CWOps CW Open	2 2300Z 1600Z California QSO Party	3 2150Z 6 2100Z ARRL SS CW	5 1600Z ARRL 160
9 1800Z NAQP CW	10 0600Z 13 0000Z 14 2400Z WPX RTTY	14 0000Z NA Sprint RTTY	14 0400Z 10 0700Z JIDX CW	11 1300Z 8 1100Z CQ-M DX	12 1100Z 14 0300Z ARRL June VHF	14 1200Z 10 1200Z IARU HF	15 0000Z 11 2300Z WAE CW	11 0000Z 12 2300Z WAE SSB	9 0600Z 10 0600Z Oceania CW	13 0000Z 14 2300Z WAE RTTY	12 2300Z ARRL 10
16 1800Z NAQP SSB	17 0600Z 20 0000Z 21 2400Z ARRL DX CW	20 1200Z 21 1200Z Russian DX	21 1200Z 17 0900Z CQMM DX	18 2300Z 15 1200Z King of Spain	16 1200Z 19 0000Z All Asian CW	17 2100Z 18 1900Z CQ VHF	21 1800Z 22 0900Z NAQP SSB	18 1600Z 19 0600Z WA/NJ/NH QSO Parties	16 1500Z 17 1450Z Worked All Germany	20 2100Z 22 0300Z ARRL SS SSB	18 2300Z RAC Winter
16 1900Z ARRL January VHF	18 0300Z 26 2200Z CQ 160 SSB	26 2200Z 28 0800Z WPX SSB	27 2400Z 28 1800Z Florida QSO Party	24 1800Z 25 2100Z Contest University Dayton Hamvention	23 1700Z 26 1800Z ARRL Field Day	27 1200Z 24 1200Z RSGB IOTA	24 1200Z 25 1200Z WW Digi	25 0600Z 29 1200Z CQWW RTTY	26 2400Z 23 2400Z CQWW CW	23 2400Z 24 2400Z CQWW SSB	24 2500Z 25 2400Z HAPPY HOLIDAYS
29 2200Z CQ 160 CW	31 2100Z			29 0000Z 30 2400Z WPX CW					30 0000Z 31 2400Z CQWW SSB		

What is it? – December, 2020

by Fred Belghaus W2AAB

This month's puzzler is a building.

Hints:

- It was located in Fair Lawn.
- It no longer exists in the form shown in the picture.
- The picture dates from about 1970.

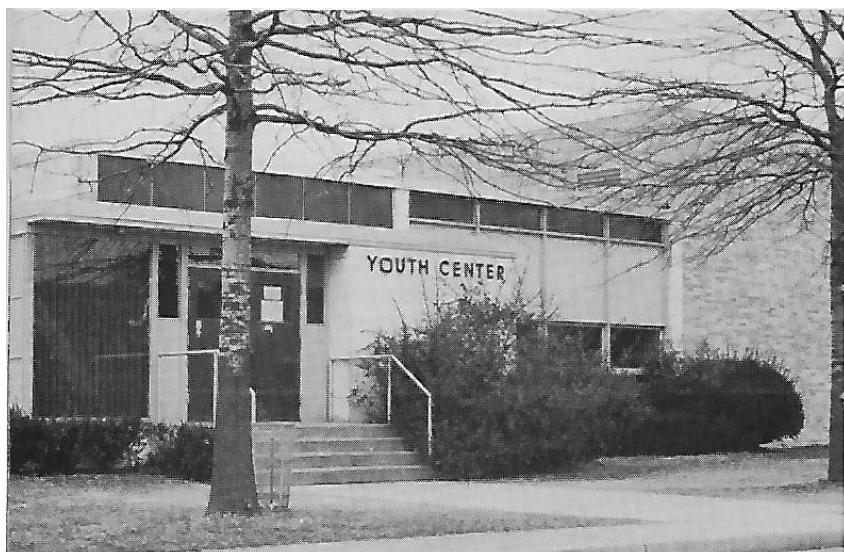
Questions:

- What was it commonly called?
- Where was it located?
- What is it now?

(Answers next month)

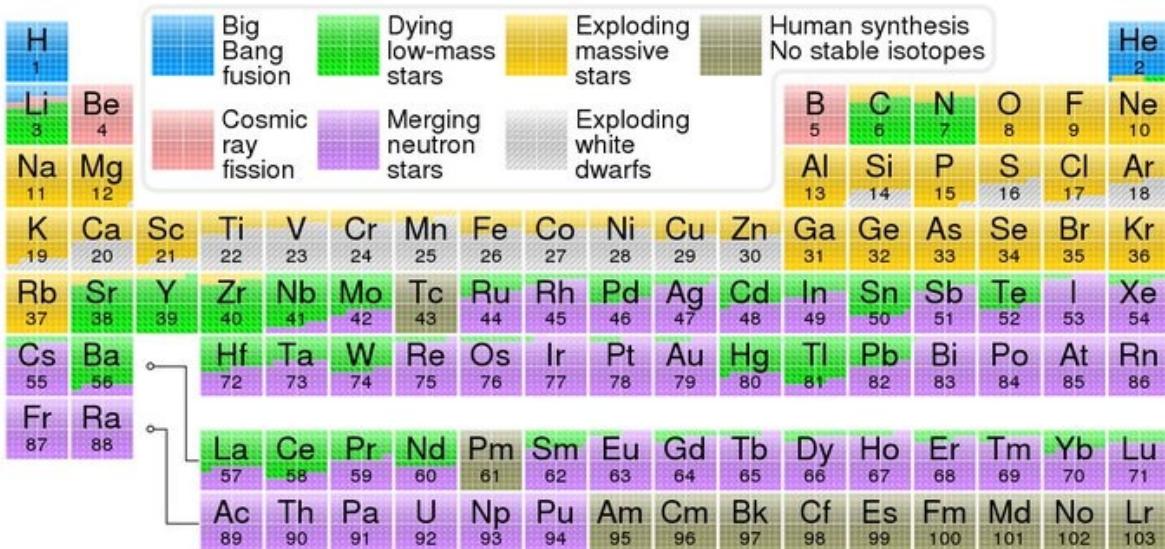
73,

Fred W2AAB



Where Did That Come From?

The fancy ham radio contest calendar idea on page 41 came from the item below — “The Origin of Elements”



Ed - itorial: Out With The Old

And so, mercifully, 2020 comes to an end.

As hard as it has been, we have a lot to be thankful for as FLARC members. Here are a few things, in no rank order.

We have stayed together as a club. Our membership is basically unchanged from last year and that is a testament to your interest and support.

We created a nightly health and welfare net that received national recognition for its rapidity in getting organized and consistency night after night. Thanks to Dave KD2MOB and Nomar NP4H for holding it together for 200 nights. Let us hope we do not have to activate it ever again the same way.

Our social media presence is growing (especially our little YouTube channel now with 500 subscribers) and that has given us much notoriety.

We have started five special interest groups and have kept them active and growing — go to our [groups.io](#) page and sign up for some or create a new one.

ARES and RACES continue to be increasingly active as noted by our recent Red Cross drill participation. Kudos to all who have started and kept it alive and well.

We have maintained our monthly speaker programs which have highlighted the considerable talent that resides within the club. It has expanded our influence, as new viewers from India and Australia can attest for our October session. Thanks

to all who have volunteered their time and expertise to give the club purpose and interest.

We have organized some limited outdoor interpersonal activities with foxhunts - and some POTA activations, thanks to Noel W2MSA.

We have even kept this little newsletter together with more contributors than ever, and an average of 50+ pages in every issue. Thank you all.

Sadly, we lost two members this year — Paul KC2WRT (SK) in June and Bob W2REC (SK) in July. Rest in peace, and strength to their families at these holidays.

What we've given up most is the personal interaction that is the backbone of FLARC. "Networking" is the main reason we are FLARC'ers and this virus has robbed us of the camaraderie that we all probably took for granted.

I don't know about you but I'm tired of Zoom. I want to see you all personally again. I want new "good old days." When it's safe, of course.

Perhaps 2021 will be better. A vaccine looks promising at press time for delivery early in the new year. Maybe that can get us together again. Maybe a real Field Day. Let's hope for the best.

What we can all do now is plan for better days ahead. And get on the air.

Stay well. Stay safe. Good holidays to you all.

DE Ed WX2R



Report from Portable Ops SIG

For this month's SIG report we'll share with you some adventure stories from our members.

I (W2MSA) started this SIG with the intention of getting outdoors with some of you that have never done a POTA [Parks on the Air] activation and once everyone was comfortable with the process we can do a multi park activation using the club call W2NPT.

I asked the POTA admin if we would get credit as operators using the club call and the answer is yes, we would all get credit as operators and the club will get credit also. So the plan is: each team (2-3 operators) can scout the park they decide to activate from, gather information, map it out, then we can all set up a date. Reach out to me (W2MSA) with any questions and let me know if anyone is interested in practicing in this activity.

- • • • -

I (W2MSA) had a great weekend operating Portable. Jim N2JLF, invited me to give him a hand setting up my antennas (End-Fed Half-Wave EFWH 80-10m) at a location that had an elevation of 1100'.

The goal was to reach his friend in PA on 80M or 40M. The challenge was to set up the antenna as an inverted L in an area that had many branches in the way. Eventually, after strategizing and many attempts, we were able to set it up and made contacts into Canada, Florida, western PA and eventually his friend in southern PA. MISSION ACCOMPLISHED!

Jim, thanks for the invite; it was good training

Report from Portable Ops SIG, cont'd

and lots of fun.

- • • • -

Portable Ops fun continued Sunday with Steve WI2W, who invited me to meet in Fair Lawn with John W2JLH. John played with his new toys -- the Elecraft KX2 and some antennas by QRP guys. Steve was able to put his 50w amp/tuner, that he built, on the air with success. I experimented with my Yaesu FT-100D, home brew EFWH and linked dipole antennas. I was able to hunt some POTA activators. Lots of learning and fun. Thanks, Steve, for the invite.

- • • • -

I just found out that N1MM+ has added a UDC (user defined contest) for logging POTA contacts.

<https://n1mmwp.hamdocs.com/mmfiles/pota-udc/>

- • • • -

I (W2MSA) met with Jim N2JLF to activate Harriman State Park K-2069 with the parks on the air (POTA) program. Once we arrived at our site, which was an open area off the side of the main road, we realized that we had no cell signal. That meant we would have to begin our activation without spotting ourselves.

So we decided to start on 40M and have our first few contacts spot us on the pota.us website.

After operating for about a half hour we were approached by the park police asking what we were doing. They do not allow parked cars on the side of the road. After explaining to the officer that we were FCC licensed amateur radio operators conducting a practice drill, he said we were good, as long as we didn't leave our vehicles unattended.

Our activation was a success with a total of 25 contacts, two of them being DX contacts. It was a beautiful day to be outdoors and we learned that there's always a lot of room for improvement when operating portable.

Hope to do it again soon.

Fair Lawn RACES/ARES Corner, cont.

If you are interested in joining the Fair Lawn RACES, please contact me. Anyone who's a licensed amateur radio operator may join Fair Lawn RACES and there's no residential requirement.

For information regarding Bergen County RACES, please go to <http://www.bcnjraces.org>.

Please be safe and be well. Season's Greetings and have a Happy New Year!!
As of January 1, 2021, hindsight is definitely 2020. Thank you very much. 73.

David KD2MOB
Emergency Coordinator FL-ARES and President FL-RACES

American Red Cross ARC 213 General Message Sender: KD2MOB

DR#: ARCDRILL1120 Incident Name: Red Cross Message Drill Message#: 001
Precedence: Routine

To (Name/Position): ARCNORTHEAST

From (Name/Position): David KD2MOB Fair Lawn ARES Emergency Coordinator

Subject: Red Cross Messaging Drill 11-20 Date: 2020-11-14 Time: 11:41

Message

THIS IS A DRILL THIS IS A DRILL**
FAIR LAWN, NEW JERSEY FN20WW
Connection: VARA FM
Member of a Team, Two - Team Name FL ARES
Both are Winlink Capable

Approved by: David KD2MOB Position / Title: FL ARES Emergency Coordinator

How to create a reply to this ARC 213 You can print this page with your browser, if you need to obtain a written response to enter.

Reply:

Replied By (Name): Position / Title: Date / Time: Version ARC 213 1.4



Winlink Express 1.5.32.0 - KD2MOB

No active session.

System Folders

- Inbox (8 unread)
- Read Items (0)
- Outbox (0)
- Sent Items (37)
- Saved Items (0)
- Deleted Items (0)
- Drafts (0)

Personal Folders

Global Folders

Contacts

ALY_BADAWY HANK_GRIK JIM_BREHENY KARL_FRANK WILL_CONJURA

Date/Time Message ID Size Source Sender Recipient Subject

2020/11/14 16:54 3N0NQ04YBA0 1206 KD2MOB KD2MOB ARCNORTHEAST ARC 213-DR#: ARCDRILL1120, Red Cross Message Drill, Inc.
2020/11/12 01:39 8KX4TKSVHQT 359 KD2MOB KD2MOB N2ULF... VARA FM Test Message
2020/11/01 01:54 2XNJA6RY6DWE 397 KD2MOB KD2MOB AL0Y ACK Passaic County ARES Winlink and voice nets
2020/11/06 14:09 J6NRPZSCQUMV 228 KD2MOB KD2MOB AL0Y Test VARA FM Message
2020/11/06 13:19 HD5CY42NREZ 351 KD2MOB KD2MOB AL0Y ACK testing new config

Message ID: 3N0NQ04YBA0
Date: 2020/11/14 16:54
From: KD2MOB
To: ARCNORTHEAST
Source: KD2MOB
Subject: ARC 213-DR#: ARCDRILL1120, Red Cross Message Drill, Inc.
Msg#: 001, Routine

ARC 213 GENERAL MESSAGE

DR#: ARCDRILL1120 Incident Name: Red Cross Message Drill Message#: 001
Precedence: Routine
To (Name and Position): ARCNORTHEAST
From (Name and Position): David KD2MOB Fair Lawn ARES Emergency Coordinator
Subject: Red Cross Messaging Drill 11-20
Date: 2020-11-14
Time: 11:41
Message:

THIS IS A DRILL THIS IS A DRILL**
FAIR LAWN, NEW JERSEY FN20WW
Connection: VARA FM

From The President, continued.

Secretary Tom N2AXX and Trustee Fred W2ABE.

To those that remain in the board, thank you for your service and dedication to FLARC.

To those that stepped down this year, Al WA2OWL, Randy WU2S and Skip KD2BRV — THANK YOU for a job well done and for being a strong and important component of FLARC.

Now, we start to work towards 2021, with the hope that it will be a much better year and that we may unite as we would normally do and continue the tradition at FLARC of bringing the best events, presentations, contests and more.

From my family to yours, I wish you all a happy and safe holiday season. That the new year comes with all the things you want and may have missed these past months, and overall that health and happiness be with you and all close to you.

To all of you, please, be safe, stay healthy and "I'll see ya on the radio."

73,
Nomar, NP4H
FLARC President

Health and Welfare:

The club notes the death of Jean Sanders, XYL of Stan KC2K

Our condolences to both Stan and his family.

Radio Monitoring, continued.

In a few weeks we will experience the shortest day of the year in the northern hemisphere. That will be a golden opportunity to DX using one of the arctic receivers as there will be a maximum darkness path to all sorts of great DX targets.

If you give one of those receivers a try let us know what cool stuff you hear.

Have you ever wondered what it was like to run a 500 Kilowatt international shortwave broadcast station?

On January 15 the FLARC monitoring group will answer that question when we present our second ***Kawfee Tawk*** session. The featured guest will be the president of Trans World Radio / Bonaire.

More details will be forthcoming.

73 and good DX.

Dave N2AAM

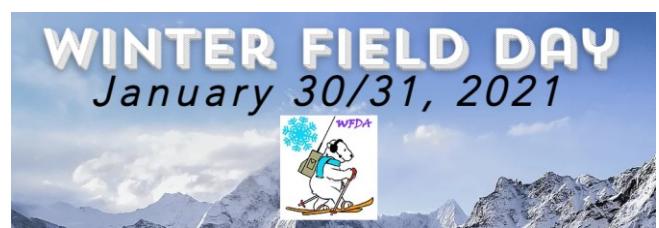
Winter Field Day Is January 30-31

Oh, the weather outside is... well, pretty nice now.

But in January it will be time for Winter Field Day. What we know now is that the town has opened the park for public events and that the tables are back under the pavilion.

Perfect conditions for WFD.

If you're interested, talk to President Nomar and the Council and let's see if we can get 2021 off to a better start than 2020.



Theoretics Demystified

This is a bit of a roundup of topics from past columns. We talked about several things and one is a dim bulb tester. Not used so much in ham radio but is a great gadget for testing a device or piece of equipment in the AC mains. In essence it is a light bulb (which are getting rare these days) in series with the unknown load. A light bulb is a dynamic resistor, in other words it changes its resistance as you power it up. When cold the resistance is low and as the filament gets hot the resistance increases. If the device under test has a short, the bulb takes up the current and lights brightly. If no short the bulb will glow dimly. You need to choose a bulb with the appropriate wattage to match the anticipated wattage of the device under test. The bulb acts as a ballast for the load!

Early tube radios of the non ham era used 'ballast' tubes to make up the difference of voltage of filament strings between what their added voltage was and the line voltage applied. They were basically a dynamic resistor. Some early radios used a special resistance line cord to do the same thing, but that was dangerous and led to the possibility of causing a fire!

The dim bulb tester provided a way to test equipment while having the safety of the bulb taking the hit if there was a short or heavy current draw. As an aside, fluorescent bulbs need a ballast as the bulbs would destroy themselves by drawing so much current until they would overheat and probably shatter. Again the ballast limits current going through the bulb. The early ballasts consisted of transformer with windings so wound that the increasing magnetic flux caused by current flow through it actually would counteract the flux on the next turn thereby limiting current flow through the ballast. This obviously takes place with the hundreds of turns inside the ballast.

That brings to mind another transformer like device, the saturable core transformer. It was wound in such a way that you could dead-short the secondary and all that would happen was that the secondary voltage would drop to almost zero and the current would reach its design limit then the amount of current flowing would be dissipated as heat. This made the transformer short proof! It was used in signaling systems and provided a safe way to deal with possible shorts on the system.

Now for a more modern topic, LEDs, that is light emitting diodes. In the beginning there was just red but then yellow and then green came out and quite a few years later blue. Attempts were made to use red blue and green to make white but the light output was feeble compared to light bulbs. Then Nichia in Japan came out with small LEDs that produced white by using a UV chip which excited a phosphor substrate that produced white light. This was almost twenty years ago. Over time improvements were made by other

Theoretics Demystified, continued

manufacturers and the COB or chip on board LEDs were born. These had the same technology but instead of a discrete LED, the uv LED was encapsulated in a yellow translucent substrate which blocked any harmful uv light. The chip and phosphor parts were in the substrate and were very small and were mounted on aluminum in order to provide a heat sink. Running the chips at a high brightness produces heat which can kill the led chip. First the cob leds were ganged on strips and now also single cob chips are used individually on strips in fluorescent tube replacements and computer monitor backlights not to mention all kinds of screens that we all look at.

Being that phosphor is actually used to produce light, the phosphor can get tired with the same effect as an old fluorescent tube although the time span is much greater. Another consideration is the driver circuit which takes the input voltage and converts it to match the led's requirements also limiting current to prevent burnout.

Early drivers were so-so but as time went on quality improved. Some of the newest leds have 'filaments' consisting of multiple cob leds stacked in series encapsulated in a yellow ceramic translucent material which again blocks uv light. The look is a color much like an incandescent filament almost like a carbon filament lamp. The lights are used for decorative effects and also for general lighting.

A .6 watt led filament c7 bulb produces as much light as an old 7 watt c7 bulb! As for color rendition they are at 2700k which is where the human eye is most sensitive. The newest car headlights and flashlights are coming out color corrected as the bluish leds although they look brighter do not match eye response, in fact bluish light from pcs, cellphones and other lighting has proved to be detrimental to the health of the eye. That is why blue blocking glasses, car visors and color correcting of pc monitors are now used and recommended for use at least two hours before bed as the blue light has been found to be contributory to sleep disorders and eye problems. Bottom line, use 2700k lighting if possible and no higher than 4000k.

Aside from this the newest street lighting is about at 3000k and a great improvement over a thousand watt incandescent. If you find a led bulb you like for a specific application say a vanity light bar buy a spare as they are constantly changing and if one goes bad as they can it is easier to change one than all of them. The end of a difficult year is near, so stay safe and get on the air and TALK to someone, make a friend over the air, no mask required. Best wishes for New Year!

Fred Wawra, 73, W2ABE.

Ria Jairam N2RJ Highlights FLARC December Kawfee Tawk Program

ARRL Hudson Division Director Ria Jairam N2RJ will be the final co-presenter in the FLARC 2020 *Kawfee Tawk* speaker series on December 18th beginning at 7:30 PM.

As is customary for our December program, an ARRL speaker will focus on current goings-on at headquarters, a look ahead at 2021 and answer your questions about league activities.

Ria is no stranger to FLARC, being a member. She has been licensed since 1997 in Trinidad and Tobago and in the US since 2001. She first became interested in radio at 5 years old from her dad, an avid SWL and learned about amateur radio from a teacher, Mr. Tony Lee-Mack, 9Y4AL.

Ria is active in contesting, DXing, DMR, DSTAR and digital modes. To her name are several DX and contest awards including 9 band DXCC (160 through 10 meters), Challenge at the 1800+ level, all 3 modes and 325 entities mixed. She has also won several contest plaques including regional, national and North American titles in various DX contests.

Ria has won a "Top Elmer" award in 2016 for her mentoring on the Flex Radio forums and also helping users use their radios remotely. She subsequently was awarded two "Top Tester" awards in 2017. She is a volunteer QSL card sorter with the W2 QSL bureau, run by the North Jersey DX Association (NJDJA) and is the Northern NJ section manager for the Frankford Radio Club (FRC).

She is also the District 2 chair of the Young Ladies Radio League (YLRL) and a member of the British Young Ladies Amateur Radio Association (BYLARA). Ria is an alumna of the NYU Tandon School of Engineering, where she studied Electrical Engineering. In the ARRL, Ria is currently the chair of the IT Modernization committee, a member of the Programs and Services Committee, as well as ARISS and Band Planning committees.



Ria Jairam N2RJ

New ARRL CEO David Minster NA2AA To Appear At FLARC December Kawfee Tawk Program

FLARC is honored to have newly appointed CEO David Minster NA2AA at our December 18th *Kawfee Tawk* program, joining Hudson Division Director Ria Jairam N2RJ (see accompanying story in the adjacent column on the left).

David began his professional career as a software engineer, moving into management at Unilever as a Chief Information Officer. From there, he moved to fine jewelry manufacturer and retailer David Yurman, where he served as COO and CIO. More recently, he served as CEO of jewelry brands Scott Kay and Judith Ripka.

He received his Novice license, WB2MAE, in 1977, when he was in his teens. His ham radio pursuits have ranged far and wide over the years. His background includes National Traffic System training and participation in public service events, as well as contesting from home, club stations, and contest stations. In an email, David noted that he attended FLARC meetings back in the late 70s at the Old Library Theatre when he was in high school.

David earned a bachelor's degree in computer engineering from The Ohio State University and has a special interest in satellites, digital communications, remote operation, and ham radio computing and software. He has written keyer software for the commercial market, and contest logging, packet, and satellite telemetry software for personal use.



In A Nutshell

What a year with all the necessary changes we have to endure! Band conditions have not been great, but I have had a lot of fun and made new friends on 75 meters. (I put up a new antenna which really helps).

We all miss getting together and the hope is that things will get back towards normal by late spring. Winter will soon be upon us and that is the time to concentrate on getting the shack in order and updating equipment, checking connections and general upkeep of equipment.

For myself, I had to spend most of the warm weather doing outside maintenance of property and managed to put up a new antenna for 80/75/40/20/10 meters. I may also try to add 60 meters to it or put up a separate antenna for it. The point is that there is always something you can do to improve your radio experience and your life in general. It is easy to settle into the doldrums of winter, but it is far better to get on the air, TALK to people and make new friends.

For those reading this, if you are not a club member, for the price of a good pizza, you can join the Fair lawn Amateur Radio Club! Bottom line is keep active and keep learning! Our monthly guest speakers have much to offer and it is always a good learning experience.

Till then, 73, Fred Wawra, W2ABE.



FLARC Corresponds With Congressman Josh Gottheimer

FLARC has recently petitioned Representative Josh Gottheimer to be a co-sponsor of a bill designating April 18, 2021 as National Amateur Radio Day.

U.S. Congresswoman Debbie Lesko (AZ-08) introduced the bill to recognize the important contributions of amateur radio operators to our nation.

"It is my honor to introduce this legislation to honor the important contributions of amateur radio operators in Arizona and across our nation," said Congresswoman Lesko.

"Amateur radio operators are critical in times of crisis and our communities are safer thanks to their dedication to sharing important information with the public.

Lesko was approached to introduce this resolution by a young amateur radio operator, Raymond, from Peoria, Arizona.

The club will follow up on the status of the bill and congressional co-sponsors.

Your Support Keeps FLARC Healthy and Growing

This has been an unusual year due to Covid-19. While there appears to be hopeful signs, 2021 remains just as uncertain as the New Year approaches.

But we can plan for the future. And with your help, we can make even greater progress. There is hope –

- That we can get together in person again.
- That we can return to the clubhouse and have activities again.
- That we can improve the club's stations and equipment again.

This year, FLARC received full 501 (c) 3 designation. That means a gift to the club is tax deductible. Sending a generous gift today means that we can continue to build the reserves we need and get ahead of the things that need to be done when the pandemic is behind us.

Please don't wait — include FLARC in your year-end giving. Thank you.

December 2020 FLARC Annual Meeting Minutes

President Nomar NP4H called the meeting to order at 7:31 p.m. on a video conference. The group recited the Pledge of Allegiance. Secretary Randy WU2S called the roll of officers and trustees and all were present. The meeting had a quorum to conduct club business.

Secretary Randy WU2S announced that the minutes from the November meeting were sent to all members of record and published in the club's newsletter, The Resonator, which is on the club's website at <http://newsletters.FairLawnARC.org>. He asked the members present if there were any corrections or amendments needed. There were none so Skip KD2BRV moved to accept the minutes as published and Judith KC2LTM seconded the motion. The motion passed by acclamation.

Treasurer Al WA2OWL presented this month's Treasurer's report. John W2JLH moved to accept the report and Charles AC2ZU seconded the motion. The motion passed by acclamation.

President Nomar NP4H announced that paid members who are present will now vote for the one contested position this year for Trustee. The candidates are Van W2DLT and Fred W2ABE. Secretary Randy initiated a conference poll with the two candidates listed. The poll was open for just over 5 minutes to allow all paid members present to select their choice. When the poll was closed at the direction of President Nomar NP4H, candidate Fred W2ABE won the election to Trustee. President Nomar NP4H asked if there was any officers' installation procedure to be

December 2020 FLARC Annual Meeting, continued

followed. Secretary Randy WU2S responded that there is no formal installation process and that all officers and trustees assume their offices immediately following the vote at our annual December meeting.

The elected officers and trustees for 2021 are:

President	– Nomar NP4H
Vice President	– John W2JLH
Treasurer	– Bruce NJ2BK
Secretary	– Tom N2AXX
Trustee	– Don K2PD – 1 year
Trustee	– Ed WX2R – 2 years
Trustee	– Fred W2ABE – 3 years

President Nomar NP4H summarized the club's accomplishments this year in rising to the challenges and issues arising from the global pandemic. He thanked all members who contributed so much and who helped maintain an active, vibrant club.

President Nomar NP4H announced that this year's Frank Leonard W2NPT Award, which recognizes the extensive contributions of a FLARC member, will be given at the next business meeting in January.

President Nomar NP4H said that he plans to arrange a meeting for the Hamfest Committee next week. If you are interested in volunteering to help organize this event, contact Nomar or Gene WO2W.

Gene WO2W noted that all the Fair Lawn parks and buildings are closed due to reimposed pandemic restrictions. Despite that, the next VE exam session scheduled for December 12 will be held in the commuter parking lot on Saddle River Road. All exam

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candidates will remain in their cars. Gene said he has 8 people registered for this session.

President Nomar NP4H invited Aly ALØY to speak. Aly reported progress in establishing a VARA FM repeater on Garrett Mountain on 146.61 MHz. VARA FM enables hams to send email messages without using the Internet. Aly plans to set up a digipeater to extend the coverage to more of Passaic and Bergen counties. He reported that he has the necessary radio and antenna. He asked for a donated Windows computer to run the software. Steven KD2PJK immediately offered to supply a computer and bring it to Aly's home.

Ed WX2R reported for the Publicity Committee. He began by thanking the contributors to this month's Resonator newsletter. He said that Ria N2RJ is our December 18 **Kawfee Tawk** speaker. She will be joined by the new ARRL CEO David Minster NA2AA. Ed will send this year's membership survey on Saturday December 5. Members were asked to respond as soon as possible. Ed's analysis of the survey will be presented in February 2021. The January speaker will be Lauren Libby WØLD who is the CEO of Trans World Radio. He will talk about shortwave radio broadcasting. This **Kawfee Tawk** is being sponsored by the FLARC Monitoring SIG.

President Nomar NP4H raised the subject of Health and Welfare. He noted that this has been a difficult year with the illnesses and passing of several members or their spouses. He thanked Judith KC2LTM for sending cards to all affected members to convey the club's support.

Ed WX2R offered thanks and applause to the outgoing officers and trustees Secretary Randy WU2S, Treasurer Al WA2OWL and Trustee Skip KD2BRV.

President Nomar NP4H announced a welcome and applause for the incoming officers and

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trustee Treasurer Bruce NJ2BK, Secretary Tom N2AXX and Trustee Fred W2ABE.

There was a short discussion of scanner frequencies and local nets.

President Nomar NP4H wished everyone a safe and happy holiday season.

Having no further business, President Nomar NP4H asked for a motion to adjourn. Ed WX2R so moved and John W2JLH seconded the motion. The members present voted in favor and the meeting was adjourned at 8:22 p.m.

Secretary Randy WU2S reports that 44 members participated in this video conference business meeting.

Respectfully submitted,

Randy WU2S,
Secretary



FLARC 2021



Members only —

**if you need the link, contact Ed at
WX2R@arrl.net**

Your input requested by December 30th.